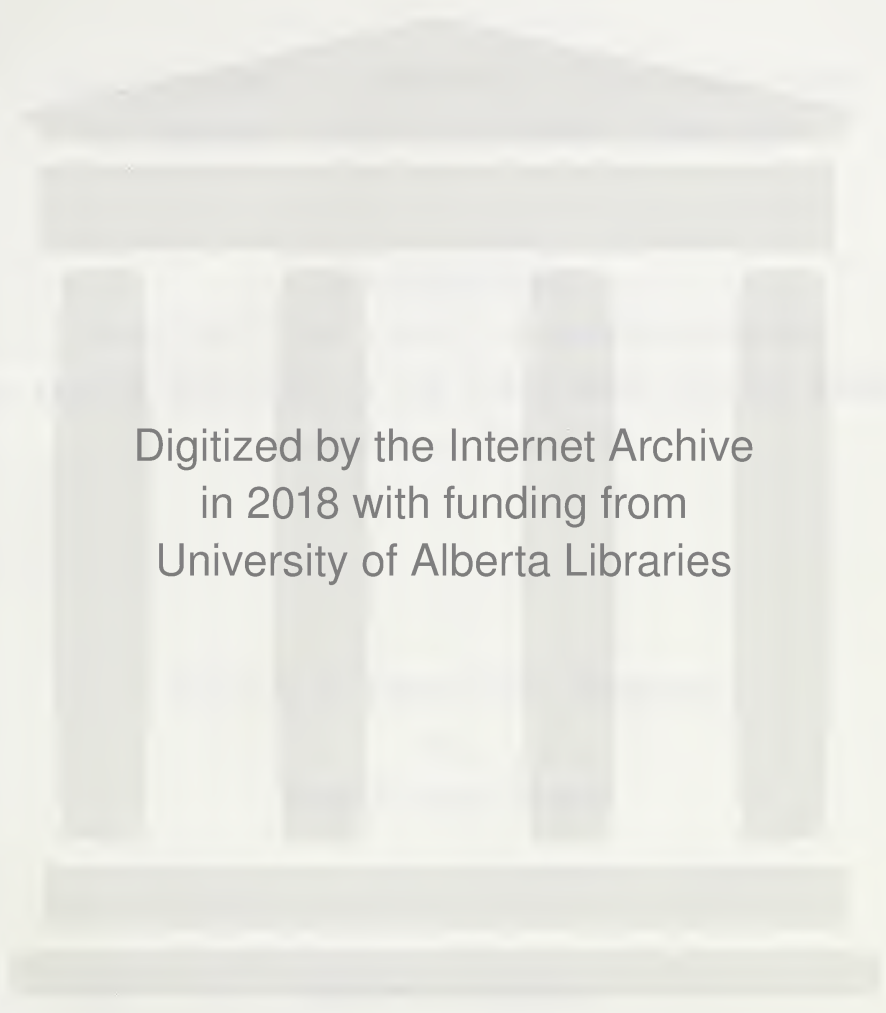


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THE UNIVERSITY OF ALBERTA

CHARACTERISTICS OF STUDENTS WHO FAILED GRADE SEVEN
IN EDMONTON JUNIOR HIGH SCHOOLS, 1951-1952

A DISSERTATION
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

DIVISION OF EDUCATIONAL PSYCHOLOGY

by

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SYNOPSIS

The study was based on the grade seven failures in the Edmonton Public School System for the years 1951 and 1952. The purpose of the dissertation was to present as comprehensive a study of failure, with particular reference to the students' scholastic progress prior to failure and their subsequent achievement after failure, as the data would allow.

The data were provided from the records at the Edmonton Public School Board offices; the promotion sheets and the cumulative record cards. Two hundred and twenty-eight students failed in 1951 and 1952, but only 212 cumulative record cards of these students could be located. It was believed that the sixteen missing cards would in no way invalidate the study. A second group of 212 cumulative record cards was drawn from the files to act as a basis for comparison in the study with particular reference to the studies on intelligence, home status, fathers' occupations and the teachers' ratings on the six areas of personality development.

A questionnaire sent to each of the 212 of the study sample was invalidated since a significant number of students could not be reached by mail.

The data gathered were classified into three main areas: the students' progress prior to grade seven, the

students' grade seven record, and the achievement of the students beyond grade seven.

Conclusions were arrived at with respect to the data in each of these areas of study. Four main causes of failure were indicated by a study of the data: low ability, poor achievement in elementary grades, poor attitude toward school, and poor socio-economic status. Implications with respect to non-promotion as a policy suggest that this policy creates overageness for the grade and has the ultimate effect of eliminating the non-achiever from school by means of drop-outs from the system. There would seem to be a need for the establishment of both special classes and special curricula for students of low ability if they are to be retained in school.

A further implication is made that an evaluation of the present experimental two year, three year and four year plan in Division I be made and thought be given to its extension to Divisions II and III. Within the plan are possibilities for the elimination of some of the problems that are a by-product of non-promotion.

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CHAPTER I

INTRODUCTION

Much careful and painstaking research has been made with respect to problems relative to promotion, school progress, retardates and drop-outs. This research has influenced present promotional practice, but every student who fails poses many problems for the teacher and the administration: Why did he fail? What aspects of previous school achievement may have led to failure? What effect did environmental factors have on his school progress? What effect did ability have with respect to failure? Should he have been a member of a regular class or should he have been in a special class? Does failure seriously affect the remainder of his educational career? These and many other questions are asked by thoughtful teachers and administrators.

I. THE PROBLEM

The purpose of this investigation is to make a thorough study of the student who fails by particular reference to four areas:

1. Teachers' ratings.
2. Environmental factors.
3. Achievement and ability.
4. Academic record.

The purposes of this study might be more clearly expressed by the following questions:

1. What influence did the student's health have on his school progress?
2. What is the relationship between failure and the father's occupation?
3. What is the relationship between age at grade seven failure and the I.Q.?
4. What is the relationship between age at grade seven failure and drop-outs from the city system?
5. What is the relationship between age at grade seven failure and student achievement prior to grade seven?
6. What is the relationship between achievement prior to grade seven and drop-outs from the city system?
7. Are teachers on sound educational ground in failing these pupils?
8. What are the probable chances of a grade seven failure completing high school?
9. Should these failing students be retained in a regular classroom or should provision be made for them outside the regular classes?
10. Are these failing students merely biding their time until they reach the legal age of fifteen so they may drop out of school?

The population for this study was made up of the 212 failures in grade seven during the years 1951 and 1952 in the

Edmonton Public School system. Grade seven was chosen as the focal point of the study for three main reasons:

1. The prior educational progress of these students could be assessed.
2. The post grade seven school achievements of these pupils could be evaluated.
3. Grade seven is the mid-point on the educational ladder toward a high school diploma.

II. BASIC ASSUMPTIONS

The first major assumption in this study is that the information given on the students' cumulative record cards has been carefully and thoughtfully recorded. It is assumed that the ratings given by a teacher represent a true picture of the pupil's progress as seen by the teacher. It is further assumed that the subjective markings with respect to emotional development were made only after thoughtful consideration by the teacher.

The second major assumption is that these students whose records are studied were failed only after due deliberation and for a variety of valid reasons.

III. THE NEED FOR THE STUDY

There have been many studies related to promotion and non-promotion in the school situation. It was believed, however, that a comprehensive and consolidated study of a

group of failures with reference to their scholastic history prior to failure and their subsequent scholastic record after failure might prove rewarding, particularly if other pertinent factors such as environment, health and mentality were also considered.

Although an examination of the related literature shows considerable study has been made of this problem of promotion, none of these studies has been related to the complete scholastic life of the non-achieving child. This study should provide information of value with respect to failure. It should prompt principals and administrators to take a second look at failures, and should also prompt all of those connected directly with education to be concerned about these potential drop-outs. It may be that the present method of elimination by failure is the best solution for the problem of failure, or it could be that there is an alternative in providing something other than regular classroom instruction for the less academically gifted student. There is evident need for a careful appraisal of our promotional system, not only from the point of view of successes achieved but also from the point of view of failures. The latter position is the one of concern in this study.

IV. DEFINITION OF TERMS USED

Certain terms as used throughout this study can only be properly understood in relation to certain specific

standards that are stated in the promotional regulations of the Edmonton Public School Board¹ as they apply to junior high schools.

Pass. A student shall have successfully completed his grade if he makes an average of 60 per cent in all subjects and a minimum of 40 per cent in each.

Failure. A student who does not achieve the minimum standard for the grade, and who, in the opinion of the teacher, is not ready for the next grade, is a failure.

Recommend. A teacher may make a provisional pass, on the basis of a trial for a two month period in the next higher grade. A student failing to make the minimum standard but who, in the opinion of the teacher, is worthy of a two months' trial in the next grade is given an "R" or "Recommend" standing.

V. LIMITATIONS OF THE STUDY

The study was dependent on the accuracy and care with which the data on the cumulative cards were recorded. The large majority of the cards were filled in carefully and the necessary information supplied. Limitations in the study were due to some omissions and incompleteness in the cumulative record cards.

1. The majority of the cumulative cards did indicate what

¹Promotion Regulations for Grades VII-VIII Edmonton Public School Board, mimeographed bulletin 1951 and 1952.

had happened to the student when he left the Edmonton system. On some others it was merely indicated that the student had "quit" or "left school". A few cards had no notation at all as to the reason for school leaving. The "quit" and "left school" students were recorded as drop-outs.

2. The cards that gave no reason for school leaving imposed a second limitation on the study. It could be assumed that because of age and poor school progress the pupil dropped out of school. The Provincial Government grade nine files were consulted to check the possibility of transfer to other Alberta points of students whose cards had no notation as to the reason for school leaving at grades seven and eight, and during grade nine. No transfers to other Alberta points were discovered, so these students were recorded as drop-outs. There still remained the possibility of the transfer of these students to points outside of Alberta.

CHAPTER II

A SURVEY OF THE RELATED LITERATURE

There has been a great deal of research on promotion and non-promotion and the allied topics of school progress, retardates, acceleration and drop-outs. In general the related literature has three underlying conclusions:

1. The present grade system for class grouping is most unsatisfactory.
2. Social promotion, progress at the pupil's maximum rate and streaming are devices used to circumvent the objections to the rigid grade system.
3. Pupils must be dealt with individually. Each child has different rates of learning and growth from every other child. The duty of the school is to insure the maximum development of each child's potential ability.

I. LITERATURE ON PROMOTIONAL PRACTICE

More recent research has attempted to determine more objectively the effects of non-promotion practices. Although there are individual exceptions, the following generalizations seem warranted from the survey of the investigations.²

1. Retention practices do not significantly increase a slow rate of learning.

²W. S. Monroe (ed.). Encyclopedia of Educational Research. (New York: The Macmillan Company, 1950) p. 1123.

2. Retention practices do not make for better student morale.
3. Retention practices do not assure mastery of a subject.
4. Retention practices do not reduce the variability of achievement found in individual classes nor increase the grade achievement averages.
5. Retention practices do not increase the personality adjustment of the retained pupil.

McManus,³ in surveying pupil progress in Edmonton city schools, approached the problem by considering the grade nine pupils in two Edmonton schools and retracing their school progress as far as data allowed from grade one to grade nine. He found that while only 2.2 per cent of the sample were accelerated, 37.8 per cent of the sample had been retarded. He found, too, that grades one, two, seven, eight and nine accounted for 73.1 per cent of all grade failures. He also suggests that too few students are accelerated and too many are retarded.

A 1954 report⁴ dealing with Alberta promotional policies revealed the emphasis placed by Alberta teachers on the mastery of subject matter. The net effect of Alberta

³Thomas M. McManus, "A Survey of Pupil Progress in Edmonton City Schools", (unpublished Master's thesis, University of Alberta, 1950).

⁴J. G. Woodsworth, et al., Reports on Promotional Policies and Practices Grades I-VIII, Department of Education, Edmonton, Alberta, 1954.

practices, this study shows, is to produce overageness or retardation. It is also indicated that failure and drop-out rates have decreased since 1929. From an inquiry made of seventy-five school systems' promotion policies, it was found that twenty-two had definite policies that could be classified into three distinct types:

1. Promotions based on achievement of definite scholastic or grade standards.
2. A compromise between achievement of standards and development of personal social and emotional qualities.
3. Regular promotions with rare exceptions.

The report states further that there is an unmistakable trend away from the rigid promotions of the past towards promotional policies that are concerned with the total growth of the child in the light of his individual capacities and needs. In Canada there is an ever increasing distrust for the traditional promotional policy and the recognition of the need for a better way of dealing with these individual differences in children through more flexible programs to meet their needs.

This trend away from rigid grade lines in an attempt to deal with the promotional problem has received the attention of several authors. Various names are applied to the process being used, "streaming", "continuous promotion", "progress at the pupil's maximum rate", and so on. In

developing one approach to this problem, Shane states that:

Teachers and administrators must start with the individual child and a consideration of his difficulties as a basis for promotion. Creative imagination applied to the promotional dilemma can do much to resolve the problem. The child's total development is the consideration as to whether he should or should not progress as fast as his classmates.⁵

Edwards⁶ goes a step further than Shane. She thinks that before long the term school grade will be relegated to the past along with the birch rod and the dunce cap. The present difficulty in promotion is a dichotomy of adherence to academic standards on the one hand and of adjusting the standards to the child on the other.

II. LITERATURE ON SCHOOL PROGRESS

Sumpton and Phillips⁷ in a review of school progress research point out that normal progress means the advancement of pupils from grade to grade. Normal progress is one grade per year, eight grades in eight years. When a pupil advances more slowly he is said to be retarded. Underage and overage are related to school progress. Thus an underage pupil is one who, as measured by the normal age, is too young for his

⁵H. G. Shane, "Promotional Policy Dilemma", National Educational Association Journal, Vol. 42, 1953, p. 412.

⁶P. O. Edwards, "Promotions Pro and Con", The Instructor, Vol. 65, September 1955, pp. 24-5.

⁷M. R. Sumpton and T. A. Phillips, "School Progress", Encyclopedia of Educational Research. (New York: The Macmillan Company, 1950) P. 1121.

grade, an overage pupil is one too old for his grade. Under-ageness may represent acceleration and overageness retardation, but such is not always the case. Many children do not enter school at the normal age and others may drop out for a half year or more after their entrance.

Reliable research on school progress began around 1900 with age-grade studies setting the general pattern. These became very popular in the second decade because of activities in four areas:

1. Many superintendents included age-grade studies in their annual reports.
2. The U. S. Bureau of Education became interested in publishing elimination and age-grade studies.
3. The expanding school survey movement included age-grade studies as an important part of the survey.
4. A number of graduate students adopted the area as a fertile field for study.

The third decade brought a still greater number of studies and followed with only minor improvements the pattern laid down previously. The depression of the third decade and the consequent federally supported educational programs for out-of-school youth in the United States caused an intensified realization that schools must increase their holding power. Doubt about the advisability of maintaining grade standards greatly increased the number of studies which compared the development of regularly promoted children with

the development of retained children.

A general shift in philosophy is shown by the number of schools using an ungraded curriculum and promotion according to some other basis such as social maturity. This change in practice has lessened the significance of school progress as a field for research.⁸

One way of assessing a promotional policy is to find out the degree of overageness or retardation represented through the grades. Another approach is to evaluate student progress at a particular grade level and note the wide variation in ability represented in all subject areas. In referring to this latter approach, Cook⁹ points out that a random group of six year olds entering grade one has a range in ability of from four to eight years in mental age. As these children grow and develop this range is widened until by the age of twelve the gap has spread to eight years. Within any one grade the range of abilities is so great that a slow learner in grade eight demoted to grade four would be a slow learner in grade four. He points out that strict policies of promotion have the effect of hoarding the dull pupils. He favors an administration policy that provides an opportunity for the teacher to know the pupil and also to have material

⁸ Ibid.

⁹Walter W. Cook, "The Gifted and Retarded in Historical Perspective", Phi Delta Kappan, Vol. 39, No. 6, March 1958, pp. 249-54.

with a range of difficulty and interest. Coupled with this administrative policy, he believes in regular promotions for slow learners. This he warns can be done, but it requires enthusiastic teachers, small classes and a systematic testing program. Cook believes that:

Books, books and more books, together with educational procedures based on greater insight on how creative power and imagination can be released in children will do much to encourage, develop and stimulate all children.¹⁰

Dunlop¹¹ in a recent Alberta study refers to the wide variation in ability that exists within every classroom. Because of this wide range of abilities, teaching must be as individualized as possible. In an average grade seven classroom, the range of the reading ability extends over five grades, in language over 4.6 grades, in spelling six grades. The range of arithmetic achievement in the average grade eight classroom is over five grades. This study also points up the promotional problem that must be met by teachers and administrators at each term end.

In order to deal effectively with such a situation as reported above, Hellerstein¹² refers to three problem groups dealt with in an experiment in Rawlings Junior High School in

¹⁰ Ibid. p. 250

¹¹ G. M. Dunlop, S. Hunka and H. Zingle, "Individual Differences in Alberta Schools", The Alberta Journal of Educational Research, Vol. 1, No. 4, December 1955, pp. 5-14.

¹² R. Hellerstein, "Fringe on the Bottom", Clearing House, Vol. 20, March 1946, pp. 387-91.

Cleveland, Ohio. These three groups; outsiders, a group needing orientation in a large school, and a group accustomed to the environment of failure, were put in an Adjustment Group which began as an experiment and became a permanent class. By means of achievement and individual tests, the degree of retardation found was disturbing. By dealing with pupils on an individual basis and adjusting the curriculum and the reading to each child's level, much progress was made. An Adjustment Group II was begun for those in the original group who had progressed above the grade four level but were not able to cope with the regular class. Adjustment Group I remained for those who had not progressed above the fourth grade level.

Mentioned throughout the literature with respect to promotion are the three major types of promotional policy. The grade standard policy is traditional and still has many adherents; the second is termed "the continuous promotion policy" which keeps the pupil within his own age group, and the third called "the continuous progress policy" is concerned with the factors affecting a pupil's adjustment. Hall and Demarest¹³ reported an experiment in Phoenix, Arizona, extending from 1946 to 1956 in which they adopted a combination of policies two and three above. In this period of

¹³W. F. Hall and R. Demarest, "Effect on Achievement Scores of a Change in Promotional Policy", Elementary School Journal, Vol. 58, January 1958, pp. 204-7.

ten years neither the ability rating nor the reading ability of fourth grade pupils has changed markedly. Yet in that same period of time 69 per cent of fourth graders now fall within the normal range as compared with 56 per cent in the first year of the study. Their conclusion is that keeping children within their age group does not result in a lowering of standards.

Not all writers are content with "social promotion". Barlow¹⁴ asks why a student should be promoted when his work is on a level one step below his present grade. A teacher's gradings become meaningless in the student's eyes, for the student knows he will be promoted. Socially promoted students do not try to do well. He states further:

Retention of students might catch problems before they become too serious. Social promotion is advisable only where the child is doing the best possible job with his limited intellect, and even then, only when the child may work on his own level and not that of the class'.¹⁵

Anfinson¹⁶ in a study of four junior high schools in Minneapolis is not convinced that the popular belief that non-promotion as an administrative device is harmful. He selected 116 matched pairs, fifty-nine pairs of boys and fifty-seven pairs of girls. Students who had failed were

¹⁴R. J. Barlow, "Social Promotion - Asset or Liability?", School And Society, Vol. 87, (February 28, 1959), p. 88.

¹⁵Ibid. p. 88.

¹⁶R. D. Anfinson, "School Progress and Pupil Adjustment", Elementary School Journal, Vol. 41, March 1941, pp. 507-14.

matched with students who had not on the bases of sex, attendance, chronological age, intelligence, socio-economic status. He eliminated those with I.Q.'s below eighty-five and attendance less than 80 per cent. To these matched pairs were given the following tests:

Otis Self-Administering Form A Intermediate.

The California Test of Mental Maturity.

The Minnesota Occupational Scale.

The Minneapolis Reading Test.

The Minneapolis Arithmetic Test.

The New Stanford Achievement Tests.

The Symonds-Block Student Questionnaire.

The Bell School Inventory.

The findings were interesting:

1. Social and personal adjustment - the advantage lay with the non-repeater.
2. Non-repeaters were better adjusted to the school curriculum, the administration, teachers and in their personal affairs.
3. However, not all the advantages lay with the non-repeaters. Repeaters ranked higher:
 - a) In the social life of the school.
 - b) In their relations with other pupils.
 - c) In their relations at home and with their families.
4. Poorly adjusted and well adjusted students were found in both groups.

Anfinson concluded that:

Non-promotion can not be regarded as the essential factor in future maladjustment. Instruction based on individual differences, is as the readers may perceive, really an avoidance of the problem of school progress, for an individualized approach would eliminate the possibility of maladjustment due to non-promotion.¹⁷

The case for continuous promotion has its proponents and so does the opposite viewpoint, that of non-promotion. Lobdell¹⁸ takes the latter position and states emphatically that repeating aids many pupils to achieve academic success. He warns, however, that repeaters must be individually dealt with and their teachers guided by definite criteria painstakingly applied.

Other ideas for dealing with school progress are repeated in the literature, one of these being that of homogeneous grouping. An exponent of this idea, Pearson¹⁹ reports that grouping in the Deer Park School in Lake Forest, Illinois, brought out the best in their students. Students were divided into classes on the basis of mental ability and academic achievement. The top group does not receive more work, but more challenging work. The program is flexible and students can be moved up or down as their progress warrants.

¹⁷Anfinson, op. cit., p. 509.

¹⁸Lawrence O. Lobdell, "Results of a Non-Promotional Policy in One School District", Elementary School Journal, Vol. 54, February 1954, pp. 333-357.

¹⁹John C. Pearson, "Certainly We Group Our Students", Phi Delta Kappan, Vol. 39, No. 8, May 1958, p. 358.

Those favoring an accelerated program feel that the school without such a program is not doing its job in properly aiding the brighter student. One of these is Alltucker²⁰ who claims that the accelerated student is not a misfit in school as he is claimed to be. A later study²¹ supporting Alltucker was concerned with a group of high school students, one to three years younger than the control group, matched by sex, I.Q., father's occupation, and school class. Age was the only variable. The younger group held more offices, received more scholarships, took part in more athletics.

Higginbottom and Whitcomb²² make a strong point for establishing principles that are a sound basis for the promotion of pupils. They list five basic principles:

1. Promotion must be in consonance with state law and local board of education regulations.
2. Promotion policy must be the practical evidence of our educational philosophy.
3. The level of values must be progressive through a student's life from grade to grade and school to

²⁰Margaret M. Alltucker, "Is the Pedagogically Accelerated Student a Misfit in High School?", The School Review, Vol. 32, March 1924, pp. 193-202.

²¹N. Keys, "Adjustments of Under Age Students in High School", Psychological Bulletin Vol. 32, October 1935, p. 539.

²²George Higginbottom and A. Whitcomb, "What Are The Defensible Practices for Promoting Pupils?", The National Association of Secondary School Principals, Bulletin 42, April 1958, pp. 210-14.

school. These values need to be arrived at co-operatively.

4. Promotional policies must stand on the premise of the dignity and worth of the individual. If we have streamed students into certain areas we should defend promotion on the basis of effort and success.
5. The basic standard of promotion is that students should achieve basic standards in keeping with their ability, and the aggressively negative elements in our schools should be eliminated.

An interesting approach to the practical aspect of doing something about student failure was reported by Brundage.²³ The staff of the Whitehall Public School, Whitehall, Ohio, decided to study the problem as a group project. Pupils who had failed once or more in the course of their academic careers were of concern in the study. Each staff member was made responsible for three students. A questionnaire was sent to the parents and a questionnaire filled in by the student. The students' replies indicated that 57 per cent felt that they did slightly better or much better work because of repeating a grade; the parents felt that 27 per cent had benefited slightly from repeating. In considering the social adjustment of students, many students felt that they

²³E. Brundage, "A Staff Study of Student Failures", Educational Administration and Supervision, Vol. 42, Nov. 1956, pp. 428-35.

had more friends after being failed, while parents stated that the difference was very slight. More students than parents felt that retention was a good thing. The next step was a series of parent-teacher interviews which had two purposes, first to keep the parents informed and secondly to solicit their cooperation and support. The study stated that students of good mental ability or socially immature often benefited from retention and the retention of students with low mental ability is seldom beneficial.

III. LITERATURE ON SCHOOL FAILURE

As mentioned earlier, various points of view on dealing with promotion have their proponents. There are some who warn that caution must be exercised. Goodlad²⁴ states there is no panacea for taking care of the difficult problem of promotion or non-promotion. His research (based on a bibliography of twenty-one studies) indicates that repeaters show a consistent pattern of undesirable growth characteristics and unsatisfactory school progress. Slow learners who have been promoted make better progress than their peers who have been kept back. Not all evidence favors the promoted group. Certain individual children have gained from the repetition of a grade. He states that the evidence

²⁴John I. Goodlad, "Research and Theory Regarding Promotion and Non-Promotion", Elementary School Journal, Vol. 53, Nov. 1952, pp. 150-5.

gathered does not favor a blanket promotion policy. Retention in the lower grades is more beneficial than retention in the higher grades. His investigation pointed up the need for communication between the home and school at the time of retention. Failing is a severe emotional experience to both parent and pupil. The value of the study was that teachers were sensitized to the individual problems of students and all teachers realized the necessity for good records in a school system.

Literature on failure at the high school level in a study of Texas schools showed that mental slowness and lack of effort were reasons given for 49 per cent of the failures. A surprisingly high 24 per cent was attributed to mental deficiency. Lafferty²⁵ asserted that 76 per cent of the failures were due to conditions for which the school was essentially responsible. The size of the school had little bearing on the per cent of failures.

In a much more intensive study, Coleman²⁶ tests as many as 113 reasons for student failure. Poor ability and lack of effort, along with parental indifference, are high on the list. Coleman groups the 113 causes under fifteen

²⁵H. M. Lafferty, "High School Failures in Texas", Encyclopedia of Educational Research, (New York: The Macmillan Co., 1952) p. 1127.

²⁶W. C. Coleman, "A Job Analysis of the Causes of School Failure", Encyclopedia of Education Research, (New York: The Macmillan Co., 1941) p. 1056.

general types: low mentality, lack of interest, lack of effort, excessive absence and poor study habits. Some causes rest with the school itself (overcrowded classes, curriculum inadequacies, lack of guidance services, incompetent instruction, lack of special classes). Many causes of failure are found in the out of school environment which are not so easily identified by nevertheless are important. To overcome school failures and lack of progress many devices have been introduced into the school program including trial promotions, special classes, semi-annual promotions and promotional units.

In a study very similar to that of Coleman's, Snyder²⁷ lists among the major causes of failure; poor foundation, frequent changes of schools, slow learning, irregular attendance, poor health, physical defects and low mentality. Other causes she would add are: the home environment, poor teaching and a lack of proper sleep. Each year there are a total of about two million elementary students in the United States who fail. She feels that proper guidance at the grade one level and homogeneous grouping would avoid the present strait-jacket grade system and eliminate many of these failures. The teacher must know the child. Trial promotions should be used in grade one because of the very high failure rate in this grade.

²⁷E. W. Snyder, "To Pass or Not To Pass", The Grade Teacher, Vol. 72, June 1955, pp. 26-28.

The goal to be achieved is a functional curriculum that eliminates failure. There should be a growing concern on the part of all those associated with education for the development of the whole child.²⁸

McKinney²⁹ in his study of the problem of promotion concluded that only 35 per cent of the elementary school repeaters actually did better work the second time, 53 per cent did not improve and 12 per cent did poorer work.

Critics state that the spirit of competition has been eliminated by the one hundred per cent annual promotion policy and the multiple standard report card.³⁰ The research on the subject is not at all certain that higher rates of non-promotion will uphold academic standards. School programs must be adapted to children as they are. There can be no defense for any other policy than one hundred per cent promotion.

Grace³¹ in his study of sixty grade one repeaters as compared with non-repeaters found that the average repeater did not learn more in two years than the non-repeater of the

²⁸Ibid. p. 28.

²⁹"Promotion and Reporting Practices", Research Bulletin of the N.E.A., Vol. 35 (December 1957) p. 150 citing B. T. McKinney "Promotion of Pupils a Problem of Educational Administration", unpublished Doctor's thesis, University of Illinois, 1928.

³⁰"Promotion and Reporting Practices", Research Bulletin of the N.E.A., Vol. 35 (December 1957) pp. 148-52.

³¹Arthur Grace, "A Study of Grade One Repeaters as Compared with Non-Repeaters of the Same Mental Age", Journal of Experimental Education, Vol. 5 (December 1936) pp. 203-5.

same mental age learned in one year.

One problem area as Hadley³² points out is due to the fact that teachers do not agree on a standard meaning for a school mark. It is used for incentives, warnings, for permanent records and for evaluation. A school mark often includes subjective factors other than actual achievement. His study found that the students who were most liked by the teacher did better than their ability warranted. Conversely, the students least liked by the teacher received lower marks than their actual attainment. Girls particularly were ranked higher than their attainment warranted. In a study of twenty classrooms girls achieved better than boys in eleven out of the twenty classrooms, yet they were assigned higher marks in sixteen out of the twenty classrooms. He sums up his review by quoting from Ross:

It seems too bad that marks received by certain individuals are conditioned more by the contours of the face than the contents of the head.³³

In a Long Beach, California, public school study,³⁴ two groups of potential failures were equated. One group repeated the grade; one group were promoted on trial. It

³²S. Trevor Hadley, "A School Mark - Fact or Fancy", Educational Administration and Supervision, Vol. 40 (February 1954), pp. 305-12.

³³C. C. Ross, Measurement In Today's Schools, (New York, Prentice Hall, 1947) p. 306.

³⁴Vivian Kline and E. P. Branson, "Trial Promotion Versus Failure", Educational Research Bulletin, Vol. 8 (January 1929) pp. 6-11.

was found that those of normal ability gained more from trial promotion than children of equal ability who repeated the grade. Children of less than average ability gained a little more by repeating the grade than by trial promotion.

IV. LITERATURE ON SCHOOL EVALUATION

Considerable attention has been given by educators of late to the complicated task of evaluation. Evaluation is primarily concerned with an estimate of student progress, but it can, and often does, go much farther. Evaluation may be extended to include a school plant, equipment, staff, curriculum and teaching practices in addition to evaluation of the progress of the student.

A difficulty that presents itself whenever pupil grading is discussed, is just how progress in a school subject area is measured. Durost³⁵ believes that teachers are inadequately trained either to properly construct, administer or interpret test findings. He would like to see as part of every teacher's training a course involving test construction and measurement. For those teachers already in the field a good deal of "in-service" training on this vital subject is, he feels, a pressing need.

In referring particularly to evaluation at high school

³⁵Walter N. Durost, "Present Progress and Needed Improvements in School Evaluating Programs", Educational and Psychological Measurement, Vol. 14, 1954, pp. 247-54.

level, Carrothers³⁶ introduces the teaching load both in and out of school as a contributory factor in the problem of student failure. Lack of interest on the part of the pupil and lack of understanding pupils on the part of the teacher, are fundamental reasons for student failure. Combined with the inability of the pupils to do the work expected, was parental unconcern and community misunderstanding of what education consists. He felt that educators can neither measure educational growth nor show the public that educational growth has been made. "Spoon feeding" at home and in the school and the community has done much to limit the effort of application needed for success.

Evaluation, however, is not limited to subject areas. If we agree with the philosophy of education which is concerned with the total growth of the child, then evaluation of a child's progress in school becomes a very difficult and complete type of analysis. This overall view is taken by Wrightstone³⁷ who states modern evaluation must consider the school plant, curriculum, the staff, subject offerings, and the pupils. Evaluation can only begin when the objectives of the school program have been considered and clarified.

³⁶G. E. Carrothers, "Why Do High School Pupils Fail?", National Association of Secondary School Principals, Vol. 30, May 1946, pp. 29-36.

³⁷Jacob Wayne Wrightstone, et al., Evaluation in Modern Education, New York, American Book Company, 1956, p. 457.

All phases of a child's growth and development must be considered and as wide a variety of testing devices in as many areas as possible must be used. To accomplish such a purpose there must be effective leadership, staff cooperation, and a willingness to explore the weaknesses in order to improve the efficiency of the school to promote and develop the whole child.

V. LITERATURE ON SCHOOL DROP-OUTS

It would seem logical to assume that there is a relationship between retardation and drop-outs. The pupil who is overage for his grade often shows negativistic attitudes toward school and often becomes a problem child. This group are prone to leave school when the legal leaving age is reached. The remedies proposed for school failure in all probability are the ones which will most effectively meet the threat of elimination. When a child is happily adjusted in his school work, the danger of retardation and eventual elimination is greatly reduced.

The reasons for school drop-outs, says Hohol,³⁸ are many and operate as a cluster. The most pertinent seem to be economic status, retardation, becoming overage, intelligence, and home status. Hohol states, "Low intelligence has

³⁸Albert E. Hohol, "Factors Associated With School Drop-Outs", The Alberta Journal of Educational Research, Vol. 1, March 1955, pp. 7-17.

been overrated as a primary cause of early school leaving."³⁹

With the present concern over drop-outs and much being written on the subject, Byrne⁴⁰ takes a rather different approach than most. He states flatly that students drop out, research shows, for two basic reasons; they leave school to work or are uninterested. There is no purpose, he feels, in retaining these pupils as the schools already have their facilities taxed to the utmost. To retain many of these pupils would be a trying experience to all concerned. Certainly, we should not harbour any idea that we would somehow increase the pool of technically trained workers by retaining these.

On the positive side this writer states that the school can do five things about the drop-out problem:

1. Identify potential drop-outs early.
2. Coordinate those factors so that a student may stay in school if he is able.
3. Provide school experiences that offer fruitful learning.
4. Help each drop-out leave school with his head high and a solid plan for the future.
5. Beware of sweeping plans to keep everybody in school.

³⁹Ibid. p. 16.

⁴⁰Richard Hill Byrne, "Beware the Stay-in-School Bandwagon!", Personnel And Guidance Journal, Vol. 36, March 1958, pp. 493-96

The difficulties of trying to retain all pupils in high school is part of a recent report.⁴¹ The report continues that it is not desirable nor possible to hold all pupils through graduation, but it is possible to hold a greater portion of high school students for a longer period of time than now obtains. The measurement of holding power was arrived at by relating the number of graduates to the number of ninth grade pupils. On this basis the holding power of Ithaca Public Schools varied from 70 per cent to 77 per cent between 1947 and 1951. The report also notes that holding power is affected by conditions outside as well as within the school. The greatest failing of the high school, the report continues, is the lack of understanding of children. Many of the fifty students who dropped out between 1945 and 1950 might have been saved if some staff member had gained a fuller understanding of the situation and made appropriate adjustments. However, youth who left school revealed a pattern of values and attitudes at variance with the school, the home or the community. To be retained the child's values and the school's values must be consonant.

⁴¹Ithaca Public Schools "Report of Drop-Out Committee", Bulletin No. 141950-1951, April 6, 1951.

CHAPTER III

I. SOURCES OF THE DATA

The data for the study were made available by the Edmonton Public School Board. This was supplemented by reference to the files of the Provincial Department of Education. From the promotion sheets of all grade seven pupils in the Edmonton city school system, the names of students who had failed during the years 1951 and 1952 were determined. In all, 228 students were listed, and the cumulative records of 212 were still on file in the School Board offices. A search of the cumulative records on file and an examination of the present high school pupil rosters failed to turn up the missing cards or to determine whether the missing pupils were presently, or had recently been, enrolled in Edmonton public schools. There were two possible reasons to account for cards not being available. The first, a change of name or serious misspelling of a name on the promotion sheets; and the second, which was more likely, the actual loss of a card somewhere in the system. It was believed that the missing sixteen cards would in no way invalidate the sample which would be used as the basis for any valid conclusions that the data might reveal.

To serve as a basis of comparison with the study sample, a reference sample of 212 cumulative record cards was drawn from the files at the Edmonton Public School Board offices.

From sixty-five hundred alphabetically arranged cards, every thirtieth card was drawn until 212 were in the sample. While this method of selecting the reference sample could not meet the basic requirement of a true random sample, it was considered that any bias in sampling introduced by the method used would be negligible. It was believed that a basis of comparison would be helpful in four areas: with reference to the Laycock Mental Ability Test because statistics were lacking with respect to the normal distribution of scores of city pupils; with reference to fathers' or guardians' occupations; with reference to home status; and particularly with reference to the teachers' ratings on the six areas of personality development. The significance of the differences between the study sample and the reference sample was tested by χ^2 in each of the four areas mentioned above.

A careful study of the cumulative record cards revealed pertinent information that could be used advantageously in assessing these grade seven failures. The cumulative record card was supplemented by a separate attendance and progress card which included the complete medical history of each child. The data from each student's set of cards was duly noted on specially prepared summary data sheets. This information was then coded on International Business Machine cards for analysis. The coding of the various data is summarized in Appendix A.

II. THE QUESTIONNAIRE

To supplement the information on each student, a questionnaire was sent each of the 212 that constituted the study sample (Appendix B). This questionnaire inquired about the highest grade of schooling attained, the further training taken since leaving school, the present employment and the type of employment. They were asked, with respect to their attitude toward school, if they were attending school now would they continue with their schooling or drop-out at the same grade; and finally whether or not they were married.

III. ANALYSIS OF DATA

The data on the students' records were divided into three main areas:

1. Pre grade seven.
2. Grade seven.
3. Post grade seven.

In addition, the following study sample data were tabulated as contingency tables and tested for the existence of pertinent relationships using the χ^2 test.

1. The age at grade seven failure and the intelligence quotient.
2. The age at grade seven failure and the achievement prior to grade seven.
3. The age at grade seven failure and the drop-outs from the city system.

4. The fathers' occupations and the intelligence quotient.
5. The achievement the repeated year in grade seven and the drop-outs from the city system.

CHAPTER IV

ANALYSIS AND SIGNIFICANCE OF THE DATA

The data were organized to present as complete a description of grade seven failure as possible. Grade seven failures were analysed in main areas:

1. Pre grade seven.
2. Grade seven.
3. Post grade seven.
4. Relationship of selected factors to failure.

I. PRE GRADE SEVEN STUDY

To deal effectively with this particular area of the students' progress, academic achievement and the environmental factors of the 212 students in the study sample were examined as follows:

1. Age at grade one entrance.
2. Health factors.
3. Home status.
4. Father's occupation.
5. Achievement prior to grade seven.
6. Pre grade seven schooling in Edmonton.
7. Unit Scale Reading, grade four.
8. Spelling Ability Test, grade four.
9. Intelligence.

Ayres⁴² in reference to judging overageness and acceleration from age tables used a two year age span to represent normal progress for each grade. In Edmonton the earliest starting age for grade one is five years six months. Using Ayres' scale, five years six months to seven years six months is normal for grade one.

TABLE I
AGE AT GRADE ONE ENTRANCE, BY SEX

	Under 5-6	5-6 to 6-0	6-1 to 6-6	6-7 to 7-0	7-1 to 7-6	Total
Girls	1	15	49	17	2	84
Boys	2	31	71	22	2	128
Totals	3	46	120	39	4	212

This table indicates that all of the sample fall within the age span that is normal for the grade. None of these students was handicapped by late school starting.

Louttit⁴³ in grouping causes of retardation, lists as one group "causes primarily concerning the child". Health

⁴²L. P. Ayres, "Laggards in Our Schools", Encyclopedia of Educational Research. (New York: The Macmillan Co. 1941) p. 442.

⁴³C. M. Louttit, Clinical Psychology of Exceptional Children. (New York: Harper and Bros. 1957) p. 236.

is one of these factors.

TABLE II
HEALTH FACTORS, BY SEX

	Normal Health	General Poor Health	Operation or Physical Weakness	Emotional Weakness	Hearing Loss	Total
Girls	72	3	2	5	2	84
Boys	121	2	0	5	0	128
Totals	193	5	2	10	2	212

Table II above gives the health records of the sample. One hundred and ninety-three enjoyed normal good health. Only 9 per cent may have been adversely affected by personal health reasons. Health may be discounted as a major reason for failure in this sample.

Coleman⁴⁴ in his study lists conditions in the home as one of the reasons for failure. Table III shows the home conditions for the study sample compared with the reference sample.

⁴⁴W. C. Coleman, "A Job Analysis of the Cause of School Failure", Encyclopedia of Educational Research, (New York: The Macmillan Co. 1941) p. 442.

TABLE III
HOME STATUS, BY SEX

	Normal Home	One Parent Deceased	Living With Grandparents	Government Ward	One Parent Deserted	Both Parents Employed	Mother Divorced and Remarried	Father Divorced and Remarried	Mother and Father Separated	Orphan	Total
<u>A. Study Sample</u>											
Girls	64	8	0	1	0	7	2	0	2	0	84
Boys	95	12	2	0	1	10	1	0	7	0	128
Totals	159	20	2	1	1	17	3	0	9	0	212
<u>B. Reference Sample</u>											
Girls	95	8	0	0	2	2	0	0	0	0	107
Boys	93	7	0	0	1	2	0	0	2	0	105
Totals	188	15	0	0	3	4	0	0	2	0	212

In the study sample, 159 come from normal homes. An arbitrary grouping of other than normal homes as broken homes puts fifty-three in that category. A clearer understanding of the significance of this data may be seen from a comparison with the reference sample. Twenty-four came from homes which could be described as broken, as compared with fifty-

three among the failures. It would appear that abnormal home conditions are almost twice as frequent among the failing group as in the normal population. The differences for both totals and for sex in the study sample and the reference sample when tested by χ^2 were significant at the 1% level of confidence.

Socio-economic status of the home and student failure are often linked in the research literature. Douglas and Campbell state:

Failures come largely from homes of inferior mental status, there were few evidences of cultural interests and the fathers were skilled laborers.⁴⁵

Table IV indicates that 91.5 per cent of the parents of the pupils in the study sample were in the unemployed, unskilled, semi-skilled or skilled group. The sample represents very much the same group as studied by Douglas and Campbell. Thirty-three of the reference sample, as compared with 128 of the failure group, were in the semi-skilled, unskilled or unemployed group. Fifty-eight, or 27.3 per cent, of the reference group were in the managerial or professional group as compared with only eight, or 3.8 per cent, in the failure sample. Thirty-five more parents were in the skilled group in the reference sample than appeared in the failure sample. Considering the lower three categories;

⁴⁵H. R. Douglas and I. Campbell, "Factors Related to Failure in Minneapolis Junior High Schools", Elementary School Journal, Vol. 37, November 1936, p. 188.

unemployed, unskilled and semi-skilled; 58.5 per cent of the study sample were in this class, while only 15.5 per cent of the reference sample were represented in this group. The differences between the study sample and the reference sample were significant at the 1% level of confidence for totals; but under sex, only the boys showed a significant difference. The difference between the girls of the two samples was not significant.

TABLE IV
FATHER'S OR GUARDIAN'S OCCUPATION, BY SEX

	Unem- ployed	Un- skilled	Semi- skilled	Skilled	Mana- gerial	Profes- sional	Blank	Total
<u>A. Study Sample</u>								
Girls	3	19	31	26	2	3	0	84
Boys	4	21	46	53	2	1	1	128
Totals	7	40	77	79	4	4	1	212
<u>B. Reference Sample</u>								
Girls	0	8	13	54	21	7	4	107
Boys	1	4	7	60	20	10	3	105
Totals	1	12	20	114	41	17	7	212

The history of academic progress in grades prior to grade seven is presented in Table V. One hundred and eleven, or more than half the study sample, had experienced previous failure in one or more grades. An additional thirty-one had been recommended on one or more occasions. Of those who had passed all grades previously the majority were borderline cases. Most of the study sample had indicated by their academic records that they were "out-of-step" with the school curriculum.

TABLE V
ACHIEVEMENT PRIOR TO GRADE SEVEN, BY SEX

	Repeated Two or More Grades	Repeated One Grade	Recommended in Two or More Grades	Recommended in One Grade	Clear Passes	Double Promotion	Blank	Total
Girls	14	27	1	11	27	0	4	84
Boys	27	43	6	13	25	1	13	128
Totals	41	70	7	24	52	1	17	212

Students who move frequently from system to system may be adversely affected academically. Table VI presents the number of years that these students spent in the Edmonton system. This table indicates that 120, or 56.6 per cent, of

the sample spent all their school years in Edmonton. Arbitrarily considering three years or less in the system as a possible source of academic difficulties, fifty-eight, or 27.3 per cent, of the sample were so affected. Another possible source of academic difficulty does not show, that is movement from school to school within the system.

TABLE VI

PRE GRADE SEVEN SCHOOLING IN EDMONTON, BY SEX

	All Schooling in Edmonton	6 Years	5 Years	4 Years	3 Years	2 Years	1 Year	Entered at Grade 7	Away 1-2 Years and Returned	Blank	Total
Girls	49	2	1	8	3	6	12	2	0	0	84
Boys	71	3	4	11	7	6	18	4	0	0	128
Totals	120	5	5	19	10	12	30	6	0	0	212

What about the reading ability of these failing students? The ability to read affects every subject area in the curriculum. To provide a basis for examination of the reading ability of this sample of 212 failing students, the scores of the Unit Scale Reading Test given in grade four were recorded.

The Unit Scale Reading Test results were normalized on

a city wide school population. Revisions have been made and revised norms were determined in 1948 and 1951. Since the test is administered in January, an average grade four student would score about 4.5 to 4.9 at this time of year. However, small deviations from the norms should not be regarded as too significant.⁴⁶

TABLE VII
UNIT SCALE READING SCORES GRADE FOUR, BY SEX

	Below 3.0	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	5.5 to 5.9	6.0 to 6.4	6.5 to 6.9	7.0 to 7.4	7.5 to 7.9	Blank	Total
Girls	1	4	9	24	4	3	2	1	2	0	0	34	84
Boys	2	7	22	24	5	13	3	2	0	0	1	49	128
Totals	3	11	31	48	9	16	5	3	2	0	1	83	212

An examination of the failing sample indicated that within the group was a range of reading skills of 4.5 years. Thirty-six students out of 212 in the sample scored normal or better than normal scores, while ninety-three, or 72.6 per cent, of those who took the test showed some reading disability varying from slight to serious.

⁴⁶"Directions for Scoring", Unit Scale Reading Test Manual, Edmonton Public School Board, 1951.

At the grade four level a Spelling Ability Test was given to all Edmonton public school students. This test was normalized on the city school population in exactly the same way as the reading test mentioned earlier. This test was given in May and scores of 4.5 to 5.0 were considered normal.

TABLE VIII
SPELLING ABILITY GRADE FOUR, BY SEX

	Below 3.0	3.0 to 3.4	3.5 to 3.9	4.0 to 4.4	4.5 to 4.9	5.0 to 5.4	5.5 to 5.9	6.0 to 6.4	6.5 to 6.9	7.0 to 7.4	7.5 to 7.9	Blank	Total
Girls	3	2	10	11	12	5	5	1	0	0	0	35	84
Boys	4	10	20	21	12	3	3	1	2	0	0	52	128
Totals	7	12	30	32	24	8	8	2	2	0	0	87	212

Table VIII shows a spread in spelling ability of five years. Only 35.2 per cent of those who took the test have normal scores or better for their grade. Eighty-one, or 64.8 per cent, of these students were poorer than average spellers. Again, eighty-seven missing scores prevented a complete presentation of the spelling ability of this sample.

Low mental ability is referred to frequently in the related literature as one of the major reasons for failure. The cumulative record cards of the study sample were examined

for test scores on the Laycock Mental Ability Test, the Departmental General Test score at grade nine, and the Otis Test Form A in high school. Both the Departmental Test at grade nine and the Otis Form A were discarded because of the relatively few students in the sample who had taken the tests. The recorded scores of the study sample in the Laycock Mental Ability Test were tabulated as shown in Table IX.

TABLE IX
INTELLIGENCE QUOTIENT SCORES, BY SEX
LAYCOCK MENTAL ABILITY TEST

	Below 74	75 to 84	85 to 94	95 to 104	105 to 114	115 to 124	125 to 134	Over 135	Blank	Total
<u>A. Study Sample</u>										
Girls	6	16	24	27	3	0	0	0	8	84
Boys	11	23	34	30	14	3	0	0	13	128
Totals	17	39	58	57	17	3	0	0	21	212
<u>B. Reference Sample</u>										
Girls	1	3	11	29	25	23	5	2	8	107
Boys	0	9	11	26	13	18	10	1	17	105
Totals	1	12	22	55	38	41	15	3	25	212

If I.Q. scores of 95 to 104 are considered as normal, then an examination of Table IX indicates that of the 191 whose test scores were recorded, 59.6 per cent had scores lower than normal and only 11 per cent had scores above normal.

A study of Table IX B indicates that I.Q.'s below normal (95 to 104) were 18.7 per cent of the reference sample whose I.Q. scores were recorded, as compared with 59.6 per cent below normal in the study sample. Considering scores above normal (105 and above), 51.8 per cent of the reference sample had I.Q. scores in this group as compared with 11 per cent in the study sample. The differences between the study sample and the reference sample for both the total group and sex were significant at the 1% level of confidence.

II. GRADE SEVEN STUDY

In order to present the grade seven academic achievement, or lack of achievement, of the 212 failing grade seven students, the following aspects of student progress were tabulated for the grade seven study:

1. Age at grade seven failure.
2. Attendance in grade seven, the year of failure.
3. The teacher's ratings of personality development at grade seven, the year of failure.

Again using Ayres'⁴⁷ scale to measure the degree of

⁴⁷Ayres, loc. cit.

overageness for grade seven, age 11 years 6 months to 13 years 6 months would be normal for grade seven.

TABLE X
AGE AT GRADE SEVEN FAILURE, BY SEX

	12-6 and under	12-7 to 13-6	13-7 to 14-6	14-7 to 15-6	15-7 to 16-6	16-7 and over	Total
Girls	1	34	33	10	5	1	84
Boys	3	40	41	34	9	1	128
Totals	4	74	74	44	14	2	212

Table X indicates that seventy-eight, or 36.8 per cent, of the study sample are of normal age for grade seven, while the remaining 134, or 63.2 per cent, are retarded from one to four years. Since all of this sample began grade one at a normal age (Table I, page 35), causes other than late starting were responsible for this retardation. Sex differences in this sample are not significant.

How successful were the repeaters the second year in grade seven? The related literature is in general agreement that repeaters do not do as well scholastically the second year. McKinney⁴⁸ in a study of promotion, states that only

⁴⁸McKinney, loc. cit.

35 per cent of school repeaters did better work the second year in the grade, that 53 per cent did not improve, and 12 per cent did poorer work.

TABLE XI
ACHIEVEMENT THE REPEATED YEAR IN GRADE SEVEN
BY SEX

	5% or more lower	Plus or minus 4%	5% or more higher	Left school during 2nd year	Blank	Total
Girls	6	8	53	2	15	84
Boys	5	24	66	8	25	128
Totals	11	32	119	10	40	212

Table XI indicates that 119, or 70 per cent, of the study sample did better work the second year, as compared with McKinney's figure of 35 per cent. Thirty-two, or 19 per cent, of the sample did work about the same level, as compared with 53 per cent in McKinney's study. Only eleven, or 6.7 per cent, did inferior work the second year, as compared with McKinney's figure of 12 per cent. The improvement in the second year may be more apparent than real.

Table XXXVII, page 76, indicates that the majority who received higher marks the second year were given only minimum passing grades.

As one of the important causes of non-promotion, Snyder⁴⁹ mentions irregular attendance at school.

TABLE XII
ATTENDANCE IN GRADE SEVEN, BY SEX

	119 days or less	120 to 139	140 to 159	160 to 179	180 to 200	Total
Girls	6	3	19	20	36	84
Boys	6	4	9	44	65	128
Totals	12	7	28	64	101	212

Table XII indicates that 164, or 77.3 per cent, had an attendance of 160 or more days. Forty-seven, or 22.7 per cent, had attendance fewer than 160 days. Considering that this latter group generally are poor achievers, the poor attendance may have had an important bearing on the year's results.

The teachers' ratings of these failing students in personality development is of particular significance. It must be remembered that these ratings are entirely subjective, but are, nonetheless, pertinent. Ayres stated that:

⁴⁹E. W. Snyder, "To Pass or Not to Pass", The Grade Teacher, Vol. 72, June 1955, p. 26.

Overage children constitute a serious problem to the teacher. Misfits require special attention if they are to do satisfactory work, and make more difficult the work with the other children.⁵⁰

Goodlad in a later study said essentially the same thing:

Students who repeat show a consistent pattern of undesirable growth characteristics and unsatisfactory school progress.⁵¹

If overage and retarded students tend to be problems, this fact should show up on the personality development ratings as recorded in Tables XIII - XVIII. In order to have some measure by which to judge these ratings, each of the six areas of personality development is tabulated first for the study sample of 212 failures and then for the reference sample of 212. The teachers' ratings in these subject areas are made with reference to a handbook issued by the Edmonton Public School Board.⁵² To save space the ratings may be summarized thus: ratings are given by numbers on a four point scale; 1. Very Good, 2. Good (average pupil), 3. Fair (a smaller number will rate 3), 4. Poor (only a very few poorly adjusted students would ordinarily need to be rated

⁵⁰L. P. Ayres, "Laggards in Our Schools", Encyclopedia of Educational Research, (New York: The Macmillan Co. 1941), p. 442.

⁵¹John I. Goodlad, "Research and Theory Regarding Promotion and Non-Promotion", Elementary School Journal, Vol. 53, November 1952, p. 153.

⁵²Cumulative Record Manual - Directions For Use In Edmonton Public Schools, mimeographed 1950.

as 4). Particular reference will be made to ratings 3 and 4 in each of the personality areas for these are significant. The differences between the study sample and the reference sample were tested by χ^2 for both the total group and for sex in all six areas of personality development.

TABLE XIII
TEACHERS' RATINGS OF EMOTIONAL CONTROL, BY SEX

	1	2	3	4	Blank	Total
<u>A. Study Sample</u>						
Girls	12	48	21	0	3	84
Boys	9	61	46	4	8	128
Totals	21	109	67	4	11	212
<u>B. Reference Sample</u>						
Girls	44	40	9	0	14	107
Boys	29	47	10	0	19	105
Totals	73	87	19	0	33	212

Table XIII A indicated that sixty-seven were rated 3 as emotionally unstable and four rated 4 (very unstable). In Table XIII B, of the reference sample only nineteen are rated as 3 while none is rated 4. Comparing the two tables, note that only twenty-one of the failures rated 1 while seventy-

three of the reference sample were rated in that category. The differences between the study sample and the reference sample for both total group and sex were significant at the 1% level of confidence.

TABLE XIV
TEACHERS' RATINGS OF CREATIVENESS, BY SEX

	1	2	3	4	Blank	Total
<u>A. Study Sample</u>						
Girls	1	33	43	4	3	84
Boys	7	34	69	10	8	128
Totals	8	67	112	14	11	212
<u>B. Reference Sample</u>						
Girls	21	53	17	0	16	107
Boys	14	51	13	4	23	105
Totals	35	104	30	4	39	212

In the study sample, Table XIV A, 112 are listed as 3 (imitative) and fourteen as 4 (unimaginative). In the reference sample, on the other hand, only thirty are listed as 3 and four as 4. Among the failures 35 per cent are rated as average or better (1 and 2), while in the reference sample 65.5 per cent of the group are rated as average or

better. The differences were significant for both the total group and for sex at the 1% level of confidence.

TABLE XV
TEACHERS' RATINGS OF JUDGMENT, BY SEX

	1	2	3	4	Blank	Total
<u>A. Study Sample</u>						
Girls	1	21	51	8	3	84
Boys	2	42	66	10	8	128
Totals	3	63	117	18	11	212
<u>B. Reference Sample</u>						
Girls	54	34	6	0	13	107
Boys	25	45	12	3	20	105
Totals	79	79	18	3	33	212

Table XV A lists 117 as 3 (prejudiced) and eighteen as 4 (actively intolerant). Table XV B, the reference sample, lists only eighteen as 3 and only three as 4. Considering ratings 1 and 2 as average or better, 31 per cent of the failures received these ratings, while 74 per cent of the reference sample were rated in those categories. The differences were significant for both the total group and for sex at the 1% level of confidence.

It is possible that those students who were rated either 3 or 4 on co-operation were problem cases in the classroom.

TABLE XVI
TEACHERS' RATINGS OF CO-OPERATION, BY SEX

	1	2	3	4	Blank	Total
<u>A. Study Sample</u>						
Girls	14	48	18	1	3	84
Boys	10	62	40	8	8	128
Totals	24	110	58	9	11	212
<u>B. Reference Sample</u>						
Girls	49	32	6	2	18	107
Boys	28	45	10	1	21	105
Totals	77	77	16	3	39	212

Under co-operation, Table XVI A, for the failures the teachers listed fifty-eight as 3 (difficult to handle) and nine as 4 (antagonistic, disagreeable, obstructive). In the reference sample, sixteen were rated 3 and three were rated 4. Only twenty-four failures were rated 1 (actively co-operative) as compared with seventy-seven in the reference group. Sixty-seven of the failures were possible problem

cases as compared with nineteen in the reference sample. It is to be expected that those students with a background of either previous failure or poor achievement found school a frustrating experience and this frustration was shown in their lack of co-operation in the classroom. The differences between the study sample and the reference sample for both the total group and for sex were significant at the 1% level of confidence.

The personality development rating of dependability also helps to locate the difficult pupils.

TABLE XVII
TEACHERS' RATINGS OF DEPENDABILITY, BY SEX

	1	2	3	4	Blank	Total
<u>A. Study Sample</u>						
Girls	7	38	34	2	3	84
Boys	8	50	45	17	8	128
Totals	15	88	79	19	11	212
<u>B. Reference Sample</u>						
Girls	45	43	1	1	17	107
Boys	25	50	10	1	19	105
Totals	70	93	11	2	36	212

Table XVII A indicates that 79 of the failures rated 3 (much supervision and prodding needed to complete work) and nineteen rated 4 (unreliable). Table XVII B indicates that only eleven of the reference sample rated 3 and only two rated 4. Fifteen of the failures rated 1 (very dependable), as compared with seventy for the reference sample. The differences between the study sample and the reference sample were significant at the 1% level of confidence for both the total group and sex.

The personality development rating on courtesy will help identify troublesome pupils.

TABLE XVIII
TEACHERS' RATINGS OF COURTESY, BY SEX

	1	2	3	4	Blank	Total
<u>A. Study Sample</u>						
Girls	30	37	12	2	3	84
Boys	19	58	35	8	8	128
Totals	49	95	47	10	11	212
<u>B. Reference Sample</u>						
Girls	55	30	5	0	17	107
Boys	32	45	9	0	19	105
Totals	87	75	14	0	36	212

In Table XVIII A, the failure sample, forty-seven rated 3 (self-centred, saucy, insincere), and ten received 4 (anti-social, insolent, crude). Table XVIII B shows that only fourteen of the reference sample rated 3 and none rated 4. In the failure group 144 rated average or better in courtesy, while the reference sample showed 162 in the same categories. The samples were significantly different for both the total group and sex at the 1% level of confidence.

It is apparent that the group of failures are more trouble to their teachers than the normal group and generally have been rated lower in all six ratings of the personality development scale. A number of these failing students must have been a considerable trial to the teachers and interfered with normal classroom progress for the other students in the class.

III. POST GRADE SEVEN STUDY

The third phase of the study on grade seven failures has to do with their post grade seven history. To deal with this part of the study, the following areas will be considered as they apply to the study sample of 212 failures:

1. The Reading Ability Test Grade Eight.
2. The Spelling Improvement Test Grade Eight.
3. Grade eight averages.
4. Grade nine averages.
5. Grade nine departmental transmuted scores.

6. Grade ten averages.
7. Grade ten credits earned.
8. Grade eleven averages.
9. Grade eleven credits earned.
10. Grade twelve results.
11. Drop-outs from the city system.

Because of drop-outs at grade seven and during grade eight and succeeding grades, the numbers involved in the tables relating to the study sample will become smaller and smaller.

The Spelling Improvement Test Grade Eight is a test developed on the population of Edmonton city schools. Scores of 8.5 to 9.0 are considered normal for the test, which is given in May of each year to grade eight classes.

TABLE XIX

SPELLING IMPROVEMENT TEST GRADE EIGHT, BY SEX

	<u>Grade Scores</u>													Blank	Total
	Below 5-0	5-0 to 5-4	5-5 to 5-9	6-0 to 6-4	6-5 to 6-9	7-0 to 7-4	7-5 to 7-9	8-0 to 8-4	8-5 to 8-9	9-0 to 9-4	9-5 to 9-9	10-0 to 10-4	Over 10-5		
Girls	0	1	2	1	3	7	0	2	3	2	0	4	10	49	84
Boys	5	3	4	4	3	7	4	6	2	1	0	1	5	83	128
Totals	5	4	6	5	6	14	4	8	5	3	0	5	15	132	212

Table XIX indicates that only eighty out of the original 212 wrote the test. Of this group thirty-six made scores of 8.5 or higher, while forty-four, or 55 per cent, had spelling difficulties.

The Reading Ability Test was given in June and ratings of 8.5 to 9.0 were to be considered normal for the grade. This test, like others referred to, was normalized on the population of grade eight students in the Edmonton public school system.

TABLE XX
READING ABILITY TEST GRADE EIGHT, BY SEX

	<u>Grade Scores</u>													Blank	Total
	Below 5-0	5-0 to 5-4	5-5 to 5-9	6-0 to 6-4	6-5 to 6-9	7-0 to 7-4	7-5 to 7-9	8-0 to 8-4	8-5 to 8-9	9-0 to 9-4	9-5 to 9-9	10-0 to 10-4	Over 10-5		
Girls	0	0	3	4	3	5	5	5	0	3	0	2	5	49	84
Boys	3	3	2	5	4	5	6	2	5	5	0	5	10	73	128
Totals	3	3	5	9	7	10	11	7	5	8	0	7	15	122	212

An examination of Table XX indicates that of the ninety who took the test, forty-two rated as normal or better in reading, while forty-eight, or 53 per cent, had reading difficulties.

Sex differences with respect to these two tests are interesting. In the Spelling Improvement Test, 45.7 per cent of the girls were below standard and 66 per cent of the boys who wrote the test were rated substandard. In the Reading Ability Test thirty-five girls out of forty-five who wrote the test, or 71 per cent, were below normal reading ability, while thirty boys out of the fifty-five who took the test, or 54.5 per cent, were below normal. It would appear that among these failures the girls are the better spellers and the boys are the better readers.

What about the post academic record of the grade seven failures? Recorded in the tables are fewer and fewer numbers as drop-outs occur along the way.

TABLE XXI
GRADE EIGHT AVERAGES, BY SEX

	30 to 34	35 to 39	40 to 44	45 to 49	<u>Averages</u>		60 to 64	65 to 69	70 to 74	Blank	Total
Girls	1	1	2	5	7	16	13	3	1	35	84
Boys	1	1	6	8	15	17	13	4	0	63	128
Totals	2	2	8	13	22	33	26	7	1	98	212

Table XXI shows the percentages received by those who reached grade eight and remained there for a full term.

Ninety-eight have dropped out (thirty-five girls and sixty-three boys). Eighty-nine of the 114 made averages of 50 per cent or better. Only thirty-four, however, made passing averages of 60 per cent or better. Consideration due to age, trial promotions and other devices must have been used to enable most of those in the bracket above 50 per cent to go on to grade nine.

TABLE XXII
GRADE NINE AVERAGES, BY SEX

	H	A	B	C	D	Blank	Total
Girls	0	0	11	20	2	51	84
Boys	0	1	19	17	2	89	128
Totals	0	1	30	37	4	140	212

The grade nine averages of the thirty-nine boys and thirty-three girls who wrote the grade nine departmentals are grouped mainly as B's and C's, with 92 per cent in these two categories. Although an A standing was achieved by only one student, only four of the seventy-two were failed in this grade.

The differences in achievement of these seventy-two students who wrote the grade nine departmental examinations can be better illustrated by their transmuted scores in each subject area as recorded from the Provincial Department of Education's files. These scores are shown in Table XXIII.

limits-also) were grouped and (twenty-five girls the middle three boys). About-also of the last group (average of 50 per cent or better). This thirty-four, however, were grouped together of 50 per cent or better. Consideration for 50 per cent (with exceptions and other devices were made from 50 per cent of those in the bracket above 50 per cent to 50 up to grade nine.

TABLE IV
GRADE NINE STUDENTS, BY SEX

	A	B	C	D	E	F	Total
Girls	0	0	11	20	2	33	66
Boys	0	1	12	14	2	29	58
Totals	0	1	23	34	4	62	124

The grade nine averages of the thirty-nine boys and thirty-three girls who wrote the grade nine mathematics are listed below as 1's and 2's, with 3's per cent in these two categories. Although in a classroom was achieved by only one student, only four of the twenty-two were listed in this grade.

The difference in achievement of these seventy-two students who wrote the grade nine department examination can be better illustrated by their percentage scores in each subject area as recorded from the individual department of Mathematics files. These scores are shown in Table III.

TABLE XXIII

GRADE NINE DEPARTMENTAL TRANSMUTED SCORES, BY SEX

Subject	0		10		20		30		40		50		60		70		80		Total
	to	9	to	19	to	29	to	39	to	49	to	59	to	69	to	79	to	89	
Reading	Girls		2	2	2	6	10	10	3										33
	Boys		1	4	4	6	13	7	2	2	2								39
	Totals		3	6	10	16	23	10	2	2	2								72
Literature	Girls	2	9	13	6	3													33
	Boys	1	2	25	8	3													39
	Totals	3	11	38	14	6													72
Language	Girls		1	1	5	16	9	1											33
	Boys			4	9	15	8	2	1										39
	Totals		1	5	14	31	17	3	1										72
Social Studies	Girls			2	4	14	9	3	1										33
	Boys		1	6	8	14	7	2	1										39
	Totals		1	8	12	28	16	5	2										72
Mathematics	Girls		3	4	7	16	2	1											33
	Boys	2		9	12	12	4												39
	Totals	2	3	4	16	28	14	5											72
Science	Girls		1	8	8	9	4	3											33
	Boys			3	5	16	10	4	1										39
	Totals		1	11	13	25	14	7	1										72

NOTE: TOTAL POSSIBLE MARK FOR LITERATURE IS 50.
ALL OTHER SUBJECTS HAVE A TOTAL POSSIBLE MARK OF 100.

In Table XXIII there is a wide range of scores noted in all subject areas. In language, social studies, mathematics and science, a range of about 60 per cent is shown, while reading has a range of about 70 per cent. Literature, which is based on a total mark of fifty, shows a range of nearly 40 per cent. Boys received a higher score than girls in both reading and science, but also received a lower score than the girls in both mathematics and social studies. Girls did not obtain higher scores than boys in any subject area, but received a lower score in science.

Of the sixty-eight who could go on to grade ten, only forty-seven wrote the grade ten finals.

TABLE XXIV
GRADE TEN AVERAGES, BY SEX

	<u>Averages</u>									Blank	Total
	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69		
Girls	1	0	2	2	6	2	5	1	0	65	84
Boys	0	1	1	5	10	6	3	2	0	100	128
Totals	1	1	3	7	16	8	8	3	0	165	212

Table XXIV indicates that there is a 40 per cent spread in averages obtained by the small group of forty-nine who wrote the grade ten finals. Nineteen, or 39 per cent, obtained

in Table VIII there is a wide range of scores noted in all subject areas. In language, racial attitudes, science and science, a range of about 50 points is noted, while reading has a range of about 70 per cent. Of course, since is based on a total score of 100, a range of 50 means that boys received a higher score than girls in both reading and science, and that received a lower score than the girls in both mathematics and social studies. This did not obtain when scores were taken in any subject area, but received a lower score in science.

In the eight-grade area, the range is not as great, but only for 7-8-year-olds the grade was similar.

TABLE VIII
GRADE TWO AVERAGE, 1932

	Total	Boys	Girls	Subjects						Total	Boys	Girls
				Reading	Science	Mathematics	Language	Racial Attitudes	Science and Science			
Boys	100	100	100	100	100	100	100	100	100	100	100	100
Girls	100	100	100	100	100	100	100	100	100	100	100	100
Total	200	200	200	200	200	200	200	200	200	200	200	200

TABLE VIII indicates that there is a 50 per cent range in averages obtained in the same group of 7-8-year-olds in science and science for 1932. However, for 7-8-year-olds, averages

averages above 50 per cent, while the remaining twenty-eight had averages less than 50 per cent. The group who have managed to remain in school thus far are not doing well.

A better idea of these students' progress in grade ten can be gained by the following table which indicates the number of grade ten credits that were actually received by the study sample.

TABLE XXV
GRADE TEN CREDITS EARNED, BY SEX

	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40	Blank	Total
Girls	1	0	0	0	4	3	4	7	0	65	84
Boys	0	0	1	2	4	5	6	7	3	100	128
Totals	1	0	1	2	8	8	10	14	3	165	212

Table XXV shows that twelve secured fewer than twenty-five credits and only seventeen actually completed a full year's work in grade ten. In terms of the original sample, only 8 per cent had completed a full grade ten program.

Forty-seven of the sample had entered grade ten, only twenty-two wrote the grade eleven finals. Table XXVI shows that of the twenty-two who wrote the grade eleven examinations only six secured an average of better than 50 per cent.

TABLE XXVI
GRADE ELEVEN AVERAGES, BY SEX

	Averages							Blank	Total
	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64		
Girls	0	0	2	1	0	2	2	77	84
Boys	1	1	4	7	1	0	1	113	128
Totals	1	1	6	8	1	2	3	190	212

A better view of grade eleven progress is shown by the number of grade eleven credits earned by these twenty-two students.

TABLE XXVII
GRADE ELEVEN CREDITS EARNED, BY SEX

	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40	Blank	Total
Girls	0	1	1	1	2	2	0	77	84
Boys	1	3	1	7	2	1	0	113	128
Totals	1	4	2	8	4	3	0	190	212

Table XXVII reveals that only seven can be considered as completing a full grade eleven program; the remaining

TABLE XXV
 GRADE ELEVATION DATA, 1960-1961

Grade	Elevation	Frequency					Total	Mean
		10-15	15-20	20-25	25-30	30-35		
10-15	10.0	1	1	1	1	1	5	10.0
15-20	15.0	1	1	1	1	1	5	15.0
20-25	20.0	1	1	1	1	1	5	20.0
25-30	25.0	1	1	1	1	1	5	25.0
30-35	30.0	1	1	1	1	1	5	30.0
Total		5	5	5	5	5	25	

A better view of grade elevation is shown in the number of grade elevations which are in the range of 10-15, 15-20, 20-25, 25-30, and 30-35.

TABLE XXVI
 GRADE ELEVATION DATA, 1962-1963

Grade	Elevation	Frequency					Total	Mean
		10-15	15-20	20-25	25-30	30-35		
10-15	10.0	1	1	1	1	1	5	10.0
15-20	15.0	1	1	1	1	1	5	15.0
20-25	20.0	1	1	1	1	1	5	20.0
25-30	25.0	1	1	1	1	1	5	25.0
30-35	30.0	1	1	1	1	1	5	30.0
Total		5	5	5	5	5	25	

TABLE XXVII shows only one grade elevation in the range of 10-15, 15-20, 20-25, 25-30, and 30-35.

fifteen earned less than twenty-nine credits and five earned less than twenty credits. Note that 8.3 per cent of the original sample of girls have reached grade eleven, while 11.7 per cent of the original sample of boys have reached the same grade.

Table XXVIII shows the results in grade twelve.

TABLE XXVIII
GRADE TWELVE RESULTS, BY SEX

	<u>High School Diploma</u>				<u>No</u>		Total
	Matric	Bus-Ed	General	Shop	Diploma	Blank	
Girls	0	2	0	0	0	82	84
Boys	1	1	1	0	4	121	128
Totals	1	3	1	0	4	203	212

From the original sample of 212, numbers have been reduced to nine. Of these nine, only five received a high school diploma, and only one obtained a University entrance standing.

The drop-out rate is more clearly shown in Table XXIX. If from this table the drop-outs are added cumulatively, eighty dropped out in grade seven, a total of 130 by grade eight. This is increased to 159 by grade nine, to 168 by grade ten, and 203 at the end of grade eleven. Of the

remaining nine who entered grade twelve, only five completed their course to secure a high school diploma.

TABLE XXIX
DROPOUTS FROM THE CITY SYSTEM, BY SEX

	<u>Drop-Outs At</u>						<u>Com- pleted</u> 12	Total
	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12		
Girls	23	23	15	15	6	0	2	84
Boys	57	27	14	12	11	4	3	128
Totals	80	50	29	27	17	4	5	212

In order to complete this part of the study, a questionnaire (Appendix B) was sent to each of the 212 students in the study sample. Seventy-five forms were not returned and eighty-nine letters were returned to the sender because of "no such address", "address unknown" or "moved". The distribution of the forty-eight completed questionnaires by grade of completed schooling are tabulated in Table XXX.

Table XXX shows that for the whole sample, the rate of return was only 22 per cent. It is worth noting, however, that the returns become progressively better as the grades advance, until in grade twelve 78 per cent replied. The percentage of returns was so low that little significance can be attached to the findings of this part of the study.

remained when the subject was female, only five completed their course in virtue of high school diploma.

TABLE 1

Age-Grade Ratio for the Year 1910, 1911

Total	Grade 12	Grade 11	Grade 10	Grade 9	Grade 8	Grade 7	Grade 6	Grade 5
100	10	10	10	10	10	10	10	10
100	10	10	10	10	10	10	10	10
100	10	10	10	10	10	10	10	10

In order to complete this part of the work a great-
 deal of work (Appendix B) was done in the 1910 census
 in the study made. Twenty-five years ago and returned
 and thirty-nine years ago returned in the 1910 census
 of "no other" (Appendix B) returned in 1910. The
 division of the 1910-11 census is determined by
 state of census showing are located in 1910. The
 Table 1, shows that for the whole state, the ratio
 of return was 10 to 10. It is worth noting, however,
 that the return shows progressively better in the census
 returns, until in 1910 the ratio was 10 to 10. The
 percentage of return was so low that little significance
 can be attached to the findings of this part of the study.

However, the returned questionnaires were tabulated for the interesting data they did contain. Extreme caution should be exercised by the reader in attempting to generalize from this obviously select group to the study population as a whole.

TABLE XXX

A SUMMARY OF QUESTIONNAIRE RETURNS
BY COMPARISON WITH GRADE OF COMPLETED SCHOOLING

Grade	Number Who Dropped Out at Each Grade	Number of Returns Received	Percentage Return
7	80	9	11.2
8	50	9	18.0
9	29	5	17.2
10	27	10	37.0
11	17	8	47.0
12	9	7	77.7
Totals	212	48	21.9

The replies received on the questionnaire are tabulated in Table XXXI.

TABLE XXXI

SUMMARY OF QUESTIONNAIRE SENT TO
GRADE SEVEN FAILURES OF 1951 AND 1952, MAY 21, 1959

Additional Training Taken Since School Leaving:

Business College	- 8	Barbering	- 1
Apprenticeship Training	- 14	Armed Services	- 2
Private School	- 1	Hair Dressing	- 1
Correspondence Courses	- 6	Nurse's Aid	- 1

Employment Status:

Employed	- 39
Unemployed	- 7
Continuing Studies	- 2 (evening classes)

Nature of Employment:

Unskilled	- 6	Office Work	- 7
Semi-skilled	- 7	Salesman	- 3
Skilled (tradesman)	- 15	Other	- 3
		Unemployed	- 7

Work Deals Primarily With:

People	- 20
Things	- 21

The facilities provided for the participants are as follows:

located in the building.

1. Accommodation

2. Food and beverage

3. Transportation to and from the site, and 4. Security

Additional facilities provided for the participants

1 - 1	Accommodation	2 - 1	Food and beverage
2 - 1	Transportation	3 - 1	Security
3 - 1	Medical services	4 - 1	First aid
4 - 1	Emergency services	5 - 1	Fire safety

Facilities provided for the participants

1. Accommodation

2. Food and beverage

3. Transportation to and from the site, and 4. Security

Additional facilities provided for the participants

1 - 1	Accommodation	2 - 1	Food and beverage
3 - 1	Transportation	4 - 1	Security
5 - 1	Medical services	6 - 1	First aid
7 - 1	Emergency services	8 - 1	Fire safety

Facilities provided for the participants

1. Accommodation

2. Food and beverage

Table XXXI continued.

Work Requires Mainly:

Manual Work	- 24
Office Work	- 15
Selling	- 2
Planning and Organizing	- 1

Attitude Toward Education:

Would stop school at the same grade	- 9
Would continue education	- 39

Marital Status:

Single	- 32
Married	- 16

In Table XXXI it is shown that of the forty-eight replying, thirty-four had taken additional training. With respect to their attitude toward school, if they were attending school now thirty-nine would continue their education and only nine would stop at the same grade. Thirty-nine are employed, mainly in the skilled and semi-skilled trades, and the majority are manual workers. The work pattern follows closely that of their parents (Table IV, page 39). Sixteen of the individuals replying were married.⁵³

⁵³The sending of the questionnaire prompted one mother

Non-Formal Training:

General work	34 -
Office work	13 -
Self-employment	2 -
Voluntary and other	1 -

Adults' Formal Education:

Adults who attend at the same time	9 -
Adults continuing education	39 -

Adults' Training:

Single	35 -
Married	13 -

In Table 1.1 it is shown that of the 107-110 adults, thirty, thirty-four and (adults) training. With regard to their attitude toward school, it was noted that school now thirty-nine would continue their education and only nine would not at the same time. Thirty-nine are employed, mainly in the private and semi-private sector, and the majority are manual workers. The very majority (about 80%) of the individuals training were married.

IV. RELATIONSHIP OF SELECTED FACTORS TO FAILURE

Certain pertinent relationships affecting failure were tabulated and tested for significance. Those examined for relationship were:

1. Distribution of age and I.Q. at the time of grade seven failure.
2. Age at grade seven failure and achievement prior to grade seven.
3. Age at grade seven failure and drop-outs from the city system.
4. Father's occupation and the I.Q.
5. Achievement in the repeated year of grade seven and drop-outs from the city system.

Table X, page 46, indicates that 13¹/₄ of this study sample were retarded one or more years. Is there a relationship between their retardation and their intelligence?

to contact the University. Because of the interest shown in her boy by the questionnaire, she would like the University to do something for him. The boy is twenty-three and unable to hold a steady job. He had been refused apprenticeship training and the armed services had turned him down. The boy was referred to the Educational Clinic under Professor W. B. Dockrell. Tests indicated that this boy has an extremely low intelligence quotient. During his school years this boy should have been in the special classes for those with low intelligence. He was referred to the National Employment Service and reference made to his disability, in the hope that they might find him employment within his capacities.

TABLE XXXII
DISTRIBUTION OF AGE AND I.Q. AT GRADE SEVEN FAILURE

	Below 74	75 to 84	85 to 94	95 to 104	105 to 114	115 to 124	Blank	Total
16-7 and over	2	0	0	0	0	0	0	2
15-7 to 16-6	6	4	1	1	0	0	2	14
14-7 to 15-6	7	14	10	5	1	0	7	44
13-7 to 14-6	2	15	32	16	4	0	5	74
12-7 to 13-6	0	6	15	34	10	2	7	74
12-6 or less	0	0	0	1	2	1	0	4
Totals	17	39	58	57	17	3	21	212

Table XXXII indicates a relationship between the age at grade seven and the intelligence significant at the 1% level of confidence. The table shows that generally, the older a student is in grade seven, the lower his intelligence will be. Conversely, the younger students have the highest intelligence. The mental age aspect must not be overlooked. The mental age of an older student with low intelligence is comparable to that of a younger student with higher intelligence. Chronologically, this study sample at grade seven showed a range in age of five years. The range in mental age of the group was three years seven months. This table underlines the importance of intelligence as one of the factors in retardation.

TABLE 1

PERCENTAGE OF CORRELATION COEFFICIENTS BETWEEN THE

	Below 1/2	1/2 to 3/4	3/4 to 1	1/2 to 3/4	3/4 to 1	1/2 to 3/4	1/2 to 3/4
1947 and 1948	2	7	3	7	0	0	0
1947 to 1948	3	7	1	1	0	0	0
1947 to 1948	7	11	10	5	1	0	0
1947 to 1948	3	13	14	14	0	0	0
1947 to 1948	3	1	14	10	0	0	0
1947 to 1948	0	0	0	1	0	0	0
Totals	17	37	38	37	1	0	0

Table 1. Correlation coefficients between the

at least seven and the following: (1) the

level of correlation. The table shows that generally, the

level of correlation is in good agreement, the lower the intelligence

will be. Conversely, the higher the intelligence, the higher

intelligence. The table also shows that the level of correlation

the lower and the higher the level of intelligence is

correlation is also of a higher level of intelligence.

Consequently, the table shows that the level of

shows a range in the level of intelligence. The table

and of the group was in good agreement. This table

indicates the importance of intelligence as one of the

factors in correlation.

There is a possibility of a student being overage at grade seven because of late school starting, illness, or withdrawal from school.

TABLE XXXIII
AGE AT GRADE SEVEN FAILURE AND
ACHIEVEMENT PRIOR TO GRADE SEVEN

	Repeated Two or More Grades	Repeated One Grade	Recommended Two or More Grades	Recommended One Grade	Clear Passes	Accelerated One Year	Blank	Total
16-7 and over	2	0	0	0	0	0	0	2
15-7 to 16-6	8	0	1	0	0	0	5	14
14-7 to 15-6	27	10	1	0	0	0	6	44
13-7 to 14-6	4	56	0	5	8	0	1	74
12-7 to 13-6	0	4	5	18	42	0	5	74
12-6 or less	0	0	0	1	2	1	0	4
Totals	41	70	7	24	52	1	17	212

Table XXXIII examines the possible relationship between the age at grade seven and the academic achievement prior to grade seven. This table indicates that those who are overage in grade seven at the time of failure are overage because of failure in elementary grades. More than half

the sample, 52.4 per cent, had repeated one or more grades in their earlier school years. The relationship between age in grade seven and achievement prior to grade seven is significant at the 1% level of confidence.

What is the relationship between the age at grade seven failure and drop-outs from the Edmonton city system? Table XXXIV examines this relationship.

TABLE XXXIV
AGE AT GRADE SEVEN FAILURE AND
DROP-OUTS FROM THE CITY SYSTEM

	At Grade 7	At Grade 8	At Grade 9	At Grade 10	At Grade 11	At Grade 12	Total
16-7 and over	1	0	1	0	0	0	2
15-7 to 16-6	13	1	0	0	0	0	14
14-7 to 15-6	30	10	1	1	2	0	44
13-7 to 14-6	23	24	14	9	2	2	74
12-7 to 13-6	12	14	13	17	11	7	74
12-6 or less	0	1	0	1	1	1	4
Totals	79	50	29	28	16	10	212

Table XXXIV indicates that the older students generally drop out first. Of the sixteen oldest students in our study sample, fifteen had dropped out by grade eight and the other

the sample, 21.4 per cent, had reported one or more injuries in their earlier school years. The relationship between the injuries reported and the level of confidence in their level of confidence was significant at the 1 per cent level.

What is the relationship between the level of confidence and the level of confidence from the previous data? The relationship between the level of confidence and the level of confidence is significant.

Table 1

Relationship between the level of confidence and the level of confidence

	At Grade 12	At Grade 11	At Grade 10	At Grade 9	At Grade 8	At Grade 7	Total
12-7 and over	1	0	1	0	0	0	2
11-7 to 12-6	13	1	0	0	0	0	14
10-7 to 11-6	20	10	1	1	0	0	32
9-7 to 10-6	23	24	14	9	2	0	72
8-7 to 9-6	22	14	13	11	7	0	67
7-6 or less	0	1	0	0	1	0	2
Total	73	36	25	22	12	0	168

Table 1 indicates that the level of confidence is related to the level of confidence. The level of confidence is related to the level of confidence. The level of confidence is related to the level of confidence. The level of confidence is related to the level of confidence.

in grade nine. In detecting potential drop-outs at the grade seven level, the age factor is an important prognosticator of an imminent drop-out. The relationship between age at grade seven and drop-outs from the city system is significant at the 1% level of confidence.

Table XXV examines the relationship between the fathers' occupations and the intelligence of the children that make up the study sample.

TABLE XXXV
FATHERS' OR GUARDIANS' OCCUPATIONS AND
INTELLIGENCE QUOTIENT (LAYCOCK MENTAL ABILITY TEST)

	Below 74	75 to 84	85 to 94	95 to 104	105 to 114	115 to 124	Blank	Total
Unemployed	1	2	3	1	0	0	1	8
Unskilled	4	9	12	11	1	0	3	40
Semi-skilled	5	14	15	22	9	1	11	77
Skilled	6	13	27	21	5	2	5	79
Professional	1	1	1	3	1	0	1	8
Totals	17	39	58	58	16	3	21	212

The relationship between the fathers' occupations and the intelligence of the children when tested by χ^2 was not significant.

In considering the achievement of grade seven failures in their repeated year, Table XI, page 47, shows 70 per cent of the study sample did better work the second year. This was not in agreement with other studies of repeating students.⁵⁵

Table XXXVI examines the relationship between achievement in the repeated year of grade seven and drop-outs from the city system.

TABLE XXXVI
ACHIEVEMENT IN THE REPEATED YEAR IN GRADE SEVEN
AND DROP-OUTS FROM THE CITY SYSTEM

	At Grade 7	At Grade 8	At Grade 9	At Grade 10	At Grade 11	At Grade 12	Com- pleted 12	Total
Lower (5% or more)	4	4	2	0	1	0	0	11
Same (Plus or minus 4%)	10	14	5	0	2	1	0	32
Higher (5% or more)	15	32	22	28	12	4	5	119
Did Not Re- peat Grade 7	50	0	0	0	0	0	0	50
Totals	79	50	29	28	16	5	5	212

Table XXXVI indicates a significant relationship at the 1% level of confidence between the achievement the second

⁵⁵McKinney, loc. cit.

year in grade seven and the drop-outs from the city system. An examination of the table indicates that the group who did better work the second year in the grade progressed farther in school. Five of this group managed to complete grade twelve and these were the only students of the original sample who managed to do so.

Table XXXVII indicates the averages made by the study sample in the repeated year in grade seven.

TABLE XXXVII
GRADE SEVEN AVERAGES OF STUDENTS FOR THE
REPEATED YEAR IN GRADE SEVEN

	Below 60%	60-65%	Above 65%	Total
Girls	28	30	9	67
Boys	49	31	15	95
Totals	77	61	24	162

Table XXXVII gives the year's averages of those students repeating grade seven and adds to the findings of Table XXXVI. It suggests that while 70 per cent of the repeaters did in fact receive higher marks the second year, the majority of these, 72 per cent, received only minimum passing grades. The findings suggest the possibility of some of these students being promoted for purposes of expediency.

CHAPTER V

SUMMARY OF FINDINGS

I. THE PRE GRADE SEVEN STUDY

All of the 212 students who comprised the group of failures that made up the study sample, entered grade one at a normal age. Their lack of progress in the grades was therefore not due to late school entry. Nineteen of the sample were affected by poor health. However, the drop-out rate of this group was not materially different than that of the complete sample. Health was not an important factor in failure in the complete study sample. The majority came from normal homes. Fifty-three came from broken homes. When the study sample was compared with the reference sample, it was found that broken homes were more than twice as frequent in the failing group as in the reference sample. The socio-economic status of the study sample as represented by the fathers' occupations was almost identical with the fathers' occupations represented in a study of junior high school failures.⁵⁶ A comparison of the fathers' occupations in the study sample with those in the reference sample revealed that only 3.8 per cent of the study sample were in the managerial or professional group while 27.3 per cent of the reference sample were in this

⁵⁶Douglas and Campbell, loc. cit.

category. In the study sample 58.5 per cent of the fathers were represented in the semi-skilled, unskilled and unemployed group as compared with only 15.5 per cent of the fathers in the reference sample. Previous failure had been experienced by 52 per cent of the study sample and 14.1 per cent had been given trial promotions on one or more occasions. Late entry into the Edmonton system might have adversely affected fifty-eight, or 22.6 per cent. The majority of these grade seven failures were below grade standard in both reading and spelling during grade four. The intelligence quotient of the study sample as measured by the Laycock Mental Ability Test was considerably lower than that of the reference sample. The study sample had 59.6 per cent of the students with I.Q.'s below 95 as compared with 18.7 per cent of the students in the reference sample. Only 11 per cent of the study sample had I.Q.'s above 105 as compared with 51.8 per cent of the reference sample.

II. THE GRADE SEVEN STUDY

A study of the ages at the time of grade seven failure indicated that 63.2 per cent were overage for their grade. This is significant when it is recalled that all of these students were of normal age in grade one. Seventy per cent of grade seven repeaters did better work the second year in the grade. The majority of these, however, received only minimum passing grades. A consideration of school attendance

during grade seven, the year of failure, indicated that 22.7 per cent of the sample could have been adversely affected by poor attendance. A comprehensive study of the six areas in personality development (emotional control, creativeness, judgment, co-operation, dependability and courtesy) of the study sample compared with the ratings in the same areas of the reference sample revealed that the study sample rated significantly lower in every trait than did the reference sample.

III. THE POST GRADE SEVEN STUDY

The majority of the students who reached grade eight and were given the grade eight spelling and reading tests were below normal grade standards. Grade eight final marks indicated that only 29 per cent made averages of 60 per cent or better. In grade nine, only one student received an A standing. The grade nine departmental transmuted scores revealed a wide range of achievement on each of the departmental tests. In grade ten, seventeen students actually completed a full year's work and in grade eleven there were seven who successfully carried a complete grade eleven program. Nine students entered grade twelve and five of these earned high school diplomas, one student earned a matriculation standing. Drop-outs from the city system when added cumulatively by grades show eighty drop-outs at grade seven, 130 by grade eight, 159 by grade nine, 186 by grade ten, and 203 by grade eleven.

The lack of a sufficient number of replies invalidated the follow-up questionnaire. The returns were progressively better the higher the grade the student had reached in school. Of the forty-eight who replied, thirty-four indicated they had taken some type of additional training since leaving school.

IV. RELATIONSHIP OF SELECTED FACTORS TO FAILURE

1. The relationship between the age at grade seven and the intelligence quotient was found to be significant at the 1% level of confidence.
2. The relationship between the age at grade seven failure and the achievement prior to grade seven was found to be significant at the 1% level of confidence.
3. The relationship between the age at grade seven failure and the drop-outs from the city system was found to be significant at the 1% level of confidence.
4. The relationship between the fathers' occupations and the intelligence quotient was not a significant one.
5. The relationship between the achievement the repeated year in grade seven and the drop-outs from the city system was found to be significant at the 1% level of confidence.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

This dissertation has described the grade seven failures in three main areas: the progress of the pupils prior to grade seven, the achievement of the pupils at grade seven, and the achievement of those who stayed in school and progressed beyond the grade seven level. Conclusions are stated with respect to each of these areas.

I. CONCLUSIONS RESPECTING PROGRESS

PRIOR TO GRADE SEVEN

1. Late starting in school was not a factor in later retardation. All of the pupils in the study sample began grade one within normal age limits.

2. More than half of the students, 52 per cent, had failed once or more during their elementary school years. An additional 14.1 per cent of these students had been given trial promotions one or more occasions. There was ample evidence available by the time these students reached grade seven to indicate that they were having difficulty in school.

3. These students were handicapped by low intelligence. When compared with a reference sample it was revealed that 59.6 per cent of the failures, as against 18.7 per cent of the reference sample, had I.Q.'s below ninety-five. Only 11 per cent of the failures, as compared with 51.8 per cent

of the reference sample, had I.Q.'s above 105. The majority of these students could not proceed at a normal rate due to lack of ability.

II. CONCLUSIONS RESPECTING THE GRADE SEVEN STUDY

1. At the time of grade seven failure 63.2 per cent of the pupils in the study sample were overage for their grade. Since they all started school within normal age limits this retardation was due to failure in elementary grades.

2. The fact that 70 per cent of the pupils who repeated grade seven did better work the second year would seem to indicate that repeating the grade was of value to the majority. It must be borne in mind, however, that the majority of those doing better work the repeated year received only minimum passing grades. However, there was the suggestion that those who did much better work the repeated year in the grade progressed farther in school.

3. The study sample rated significantly lower on all six areas of the personality development scale on ratings given by the teachers than did a reference sample with which it was compared. The greater number of 3 and 4 ratings in the study sample was an indication that these pupils had much more difficulty in adjusting to the school situation than did the normal students.

III. CONCLUSIONS RESPECTING THE POST GRADE SEVEN STUDY

1. Eighty students dropped out at grade seven, 130 by grade eight, 159 by grade nine, 186 by grade ten and 203 by grade eleven. A large number of these students obviously waited until they were of legal age so they might leave school.

2. Five students of the original sample of 212 completed high school. The chances of a grade seven failure completing high school are about two in one hundred.

IV. GENERAL CONCLUSIONS WITH RESPECT TO FAILURE

No summary of the teachers' reasons for failing these pupils was compiled. A study of the collected data reveals certain contributing factors that caused failure at the grade seven level:

1. Low intelligence.
2. Poor achievement in elementary grades.
3. Poor attitude toward school.
4. Poor socio-economic status as represented by the fathers' occupations.

V. IMPLICATIONS WITH RESPECT TO NON-PROMOTION AS A POLICY

A study of the data with respect to the grade seven failures has indicated that 66.1 per cent of the sample had experienced previous failure or trial promotion. This was a major factor in creating the situation in which 63.2 per cent of the failures were overage at grade seven. Certain questions arise with respect to these overage students: Is it possible they had difficulty in adjusting socially with the younger students in their classrooms? How did they do in sports? Did they become problems in the classroom? The tables with respect to the six areas of personality development indicate that there were areas of maladjustment for these students. It would seem probable that previous failure and poor achievement had conditioned these students to expect little success from school. However, although 70 per cent of the repeaters in grade seven received better marks the second year, the bulk of these, 72 per cent, received minimum passing grades. It would appear that some of these students benefited from the repeated year and others may have been expediently promoted.

About sixty per cent of the failure sample had I.Q.'s below ninety-five. It would seem that this group is seriously handicapped with respect to making normal progress in school. The analysis of the six areas of personality development ratings suggests that this group of students

could have benefited from some type of program apart from the regular classes.

VI. IMPLICATIONS WITH RESPECT TO DROP-OUTS

There is evidence to suggest that a number of these students remained in school only until they reached the legal age of school leaving. There are certain implications that arise with respect to the drop-out problem as it affected these failures. Is the school program geared to favor those with normal or better intelligence? It would seem likely that a number of grade seven failures left school simply because the school curriculum had nothing to offer them. Should consideration be given to a general broadening of the curriculum to provide for those of lower intelligence? Should there be classes to provide specifically for those of lower intelligence with a special program of studies? It would appear that if anything specific is to be done with respect to a group like that represented by the study sample, consideration must be given to some special type of program in the schools.

Hohol⁵⁷ in his study of the problem of drop-outs indicated that low intelligence has been overrated as a reason for early school leaving. It would appear from the study sample of grade seven failures that low intelligence may have

⁵⁷Hohol, loc. cit.

been the major factor in poor achievement with consequent discouragement and drop-out. The apparent disagreement between Hohol's findings and those of this study is caused by the fact that Hohol's study surveyed a much broader area, including all those who dropped out of school for reasons other than failure, while this study is limited to the grade seven failures.

VII. IMPLICATIONS WITH RESPECT TO THE PRESENT EXPERIMENT IN DIVISION I

The problem of non-promotion at the elementary level is being considered with respect to a streaming program in which non-promotion is but one facet of the problem. An experiment is being tried in several Edmonton city schools with respect to three streams in Division I: an accelerated program of two years, a regular program of three years, and a four year program to look after the slow learner. The particular value of the program is that students under this plan take the same work but at different rates according to their ability. No assessment of the program has been made as yet, but it is the first major step in recognition of individual differences. Calgary has had a similar program for a longer period of time and Gillespie⁵⁸ in his evaluation of it, notes that the four year program students do not achieve as well as the repeaters and suggests that this is probably caused by the

⁵⁸E. Gillespie, "An Evaluation of Calgary Public Schools' Three and Four Year Programmes in Division I", unpublished Master's thesis, University of Alberta, 1959.

fact that teachers in dealing with the four year children do not treat them differently than others in the class. A further assessment is necessary, he believes, to see if this is the case. His study points out the need for individualized attention for these slower students. If such individualized attention is to be provided, small classes, keenly interested teachers, and principals sympathetic to the program are necessary.

It would seem that this experimental plan should provide separate classes for the slow learners. With this addition, the experimental plan may have at least partial answers to two of the major problems of promotion. Retardation creates overageness for the grade, and may also cause the overage student to be socially maladjusted to the younger students in the class. The provision of separate classes for the slow learners will have the effect of keeping students of the same age in the same classroom and should be a means of lessening this problem of social maladjustment. The repetition of a grade may result in both boredom and frustration for the student who repeats. Under the experimental plan, slow students do not repeat but proceed at a slower pace. The provision of separate classes should provide the necessary opportunity to give these slow learners the individualized attention that they need.

The ultimate extension of this plan, with special classes for slow learners, to Divisions II and III in the

school system could possibly be the means of reducing the problems of non-promotion in the Edmonton city system.

VIII. THE NEED FOR FURTHER STUDY

It is noted in this study that 128 boys as compared with eighty-four girls failed in grade seven during the years 1951 and 1952. A cursory study of the promotion sheets for the Edmonton school system reveals that more boys than girls fail at most grade levels. A profitable area for study, but beyond the scope of this dissertation, would seem to be an inquiry into the reasons for more boys failing in school studies than do girls.

Another area of study that would be profitable, and to which reference has already been made, is that of an evaluation of the two, three and four year programs being experimented with in Division I in the Edmonton city system, and their possible extension to Divisions II and III. There seem to be possibilities in this experiment, particularly with respect to some of the problems of non-promotion.

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APPENDICES

APPENDIX A

CATEGORIZATION SHEET FOR ENTERING DATA

This data was secured from the cumulative record cards of the grade seven failures in the Edmonton public school system for the years 1951 and 1952. The number to the left of each item of the data indicates the categorization number.

I. Year of failure: 1951 or 1952

II. Sex:

0. Female
1. Male

III. Age at grade one entrance:

1. Under 5 years 6 months.
2. From 5 years 6 mos. to 6 years 0 mos.
3. From 6 years 1 mo. to 6 years 6 mos.
4. From 6 years 6 mos. to 7 years 0 mos.
5. From 7 years 1 mo. to 7 years 6 mos.

IV. Age at time of grade seven failure:

1. 12 years 6 mos. or under.
2. 12-7 to 13-6
3. 13-7 to 14-6
4. 14-7 to 15-6
5. 15-7 to 16-6
6. 16-7 and over.

V. Home status:

1. Normal home.
2. One parent deceased.
3. Living with grandparents or foster parents.
4. Government ward.
5. Parents divorced.
6. One parent deserted.
7. Mother and father both employed.
8. Mother divorced and remarried.
9. Father divorced and remarried.
- x. Mother and father separated.
- y. Orphan.

VI. Father's or guardian's occupation:

1. Unemployed.
2. Unskilled.
3. Semi-skilled (truck driver, packing plant worker).
4. Skilled (tradesman, salesman).
5. Managerial.
6. Professional.

DETERMINATION OF THE EFFECT OF THE

This data was selected from the cumulative record of the first seven years of the study and was not subject to the same type of analysis as the data of the first five years of the study. The data of the first five years of the study is presented in the following table.

1. Year of birth: 1911 to 1915

II. Sex:

- 0. Female
- 1. Male

III. Age at death:

- 1. Under 5 years of age
- 2. 5 to 9 years of age
- 3. 10 to 14 years of age
- 4. 15 to 19 years of age
- 5. 20 to 24 years of age
- 6. 25 to 29 years of age
- 7. 30 to 34 years of age
- 8. 35 to 39 years of age
- 9. 40 to 44 years of age
- 10. 45 to 49 years of age
- 11. 50 to 54 years of age
- 12. 55 to 59 years of age
- 13. 60 to 64 years of age
- 14. 65 to 69 years of age
- 15. 70 to 74 years of age
- 16. 75 to 79 years of age
- 17. 80 to 84 years of age
- 18. 85 to 89 years of age
- 19. 90 to 94 years of age
- 20. 95 to 99 years of age
- 21. 100 years of age and over

IV. Age at death seven years later:

- 1. 12 years of age or under
- 2. 13 to 14
- 3. 15 to 16
- 4. 17 to 18
- 5. 19 to 20
- 6. 21 to 22
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- 494. 997 to 998
- 495. 999 to 1000

V. Cause of death:

- 1. Normal cause
- 2. Not given
- 3. Not given
- 4. Not given
- 5. Not given
- 6. Not given
- 7. Not given
- 8. Not given
- 9. Not given
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- 190. Not given
- 191. Not given

VII. Personality ratings at grade seven at the time of failure. Basic assumption is that only those marked 3 or 4 indicate a possible problem area. These were recorded 1, 2, 3 and 4 exactly as the teacher had indicated on the student's cumulative record for each of the six areas of Personality Development:

Emotional control.
Creativeness.
Judgment.
Cooperation.
Dependability.
Courtesy (social concern).

VIII. Listing I.Q.'s from cumulative record card. The Laycock Mental Ability Test was categorized as follows:

1. Below 74.
2. 75 - 84.
3. 85 - 94.
4. 95 - 104.
5. 105 - 114.
6. 115 - 124.
7. 125 - 134.
8. Over 135.

IX. Achievement prior to grade seven:

1. Repeated two or more grades prior to grade seven.
2. Repeated one grade prior to grade seven.
3. Recommended in two or more grades prior to grade seven.
4. Recommended in one grade prior to grade seven.
5. Clear passes in all grades prior to grade seven.
6. Double promotions prior to grade seven.
7. Nothing to indicate progress - no record.

X. Achievement in the repeated year of grade seven:

1. 5 per cent or more lower than first year.
2. Plus or minus 4 per cent the second year - about the same level.
3. 5 per cent or more higher the second year.
4. Quit school after the first year grade seven.

XI. Pre grade seven schooling in Edmonton:

1. All schooling in Edmonton.
2. Six years in Edmonton.
3. Five years in Edmonton.
4. Four years in Edmonton.
5. Three years in Edmonton.
6. Two years in Edmonton.
7. One year in Edmonton.

8. No years in Edmonton - entered at grade seven and failed.
9. Away one or two years and returned to Edmonton.

XII. Subsequent scholastic achievement after repeating grade seven:

- a) Grade eight average - to be recorded to nearest per cent; e.g. 60, 48, etc.
- b) Grade nine average to be recorded as:
 1. H.
 2. A.
 3. B.
 4. C.
 5. D.
- c) Grade ten average to be recorded to nearest per cent; e.g. 60, 48.
- d) Grade ten credits earned, recorded by actual number.
- e) Type of program:
 1. Matriculation.
 2. General.
 3. Shop.
 4. Business Education.
- f) Grade eleven average, recorded to nearest per cent.
- g) Grade eleven credits earned, recorded by actual number.
- h) Grade eleven, total credits to date by actual number.
- i) Grade eleven type of program:
 1. Matriculation.
 2. General.
 3. Shop.
 4. Business Education.
- j) Grade twelve type of program:
 1. Matriculation.
 2. General.
 3. Shop.
 4. Business Education.
- k) High school diploma:
 1. High school diploma earned (100 or more credits).
 2. Matriculation program (100 or more credits).
 3. No diploma earned.
- l) Drop-outs from the system:
 1. At grade seven.
 2. At grade eight.
 3. At grade nine.
 4. At grade ten.
 5. At grade eleven.
 6. At grade twelve.

- XIII. Special health factors listed on cumulative record and medical card that could have had an influence on school progress:
1. Nothing to indicate poor health.
 2. General poor health.
 3. A noted physical weakness or serious operation, etc.
 4. A noted emotional weakness.
 5. Definite hearing loss.
- XIV. Attendance during grade seven, the year of failure:
1. 119 days or less.
 2. 120 - 139 days.
 3. 140 - 159 days.
 4. 160 - 179 days.
 5. 180 - 200 days.
- XV. Categorization of grade four tests: Unit Scale Reading Grade Four and Spelling Ability Grade Four:
0. Below 3.0
 1. 3.0 - 3.4
 2. 3.5 - 3.9
 3. 4.0 - 4.4
 4. 4.5 - 4.9
 5. 5.0 - 5.4
 6. 5.5 - 5.9
 7. 6.0 - 6.4
 8. 6.5 - 6.9
 9. 7.0 - 7.4
 - x. 7.5 and over.
- XVI. Categorization of grade eight tests; Reading Grade Eight and Spelling Ability Grade Eight:
0. Below 5.5
 1. 5.5 - 5.9
 2. 6.0 - 6.4
 3. 6.5 - 6.9
 4. 7.0 - 7.4
 5. 7.5 - 7.9
 6. 8.0 - 8.4
 7. 8.5 - 8.9
 8. 9.0 - 9.4
 9. 9.5 - 9.9
 - x. 10.0 - 10.4
 - y. 10.5 and over.
- XVII. Grade nine departmental transmuted scores were secured from the Provincial Government files. Transmuted score in each of the following subjects was recorded as it appeared on the Department's files:
1. Reading.

2. Literature.
3. Language.
4. Social Studies.
5. Mathematics.
6. Science.

A study is being conducted at the University of Alberta in connection with students who were in grade seven in 1951 or 1952. This questionnaire is concerned with a follow-up study to find out what these particular students are doing since leaving public school. We would very much appreciate your courtesy in taking a few minutes of your time to answer these brief questions.

Please fill in the questionnaire immediately and mail it in the stamped, addressed envelope.

Thank you.

1. Name

(Surname)
(Christian Names)

2. Please indicate by circling the appropriate number, the highest grade you completed in school.

7 8 9 10 11 12

3. Please put an X in the space in front of any of the following statements that apply to you.

 I have taken additional training in

....(a) Business College
(b) Apprenticeship Training
(c) Private School
(d) By Correspondence Courses
(e) other Training (name it)

4. I am presently

....(a) employed
(b) unemployed
 ... (c) continuing my studies (specify)

5. The nature of my employment is

....(a) unskilled
(b) semi-skilled
(c) skilled (tradesman)
(d) salesman or saleswoman
(e) other (please specify)

6. My work involves dealing with

....(a) people
(b) things

7. My work requires mainly

....(a) manual work
(b) office work
(c) planning and organizing
(d) selling things
(e) selling ideas

8. If I were attending school now, I would

....(a) stop school at the same grade
(b) continue my education
(c) stop school earlier to get started in a job I like

9. Status: I am

....(a) Single
(b) Married

Your courtesy in filling out this brief information survey will help to give a clearer picture of what students do after they leave school. Information gathered is set up in tabular form and no names are used. We need the name to identify the return.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

RESEARCH REPORT NO. 1000

BY J. H. HARRIS AND J. E. HARRIS

CHICAGO, ILLINOIS

1955

ABSTRACT

INTRODUCTION

EXPERIMENTAL

DISCUSSION

CONCLUSIONS

B29782